School of Pharmacy
University of Md

THE DRUG AND COSMETIC INDUSTRY

ESTABLISHED 1914

Formerly Called "DRUG MARKETS"

March, 1932

Editorials 215
Unfair Trading—Meaning of Antiseptic
Articles
Varying Drug Effects 217
Price Packaging 219
Glass Durability 221
Iodine's Market 223
Label Personality 225
Ten Cent Beauty 227
Building Packages 228
Cholesterin 233
Prize Packages 235
The Ambrosia Plan 236
Making Creams 237
Perfuming Creams 238
Quartz Lamp and Essential Oils 240
Compounders' Corner 244
For Plant Managers 246
Packaging in Glass 248

New and Non-Official 216
Ten Years Ago 216
News 249
Patents 284
Abstracts 286
Raw Material Prices 289
Drug Market Place 294
Buyer's Guide 204
Index of Advertisers 296

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Editor
THOMAS R. FARRELL

Business Manager
FRAZER V. SINCLAIR

PUBLISHED MONTHLY AT PITTSFIELD, MASS., SUBSCRIPTION PRICE, TWO DOLLARS A YEAR, IN ADVANCE, FOREIGN COUNTRIES THREE DOLLARS, THREE WEEKS' NOTICE IS REQUIRED TO CHANGE SUBSCRIBER'S ADDRESSES, AND WHEN NOTIFYING KINDLY GIVE BOTH OLD AND NEW ADDRESSES; PRINTED BY THE SUN PRINTING COMPANY, PITTSFIELD, MASS. ENTERED AS SECOND CLASS MATTER, JANUARY 1, 1928 AT THE POST OFFICE AT PITTSFIELD, MASS., UNDER THE ACT OF MARCH 3, 1879.

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D&O
ESTABLISHED IN 1798

ESSENTIAL OILS
and Kindred Products

ESSENTIAL OIL HEADQUARTERS

Over 130 years of leadership tells the story better than mere description of personality

We supply every Essential Oil for which there is a reasonable demand. We guarantee purity of all products emanating from our factory and exercise utmost laboratory control over importations sold under our label.

ESSENTIAL OILS

Natural, Concentrated, Terpeneless and Sesquiterpeneless

OLEO RESINS

Capsicum, Cubeb, Ginger, Malefern, Nutmeg, Oak Moss, Orris, Black Pepper, White Pepper and Vanilla

FLAVORS

Our line of Concentrated Flavors, for all uses, is the result of many years' practical work with the industries most interested in constant improvement of their products

BALSAMS and GUMS

For over a century the mark "D & O" has been connected with largest distribution of Natural Balsams, Copaiba, Peru, Tolu and Styrax, as well as Gum Benzoin Siam, Rangoon and Sumatra

AROMATIC CHEMICALS

NATURAL FLOWER OILS and KINDRED FLORAL PRODUCTS

COMPOUNDED PERFUME BASES

Our facilities through our own manufacturing plant and those cooperating with us---Fabriques deLaire and J. Mero & Boyveau, are unequalled. Communicate with us in confidence on any of your perfume problems.

DODGE AND OLCOTT COMPANY
180 Varick Street New York City

"The integrity of the house is reflected in the quality of its products."
Copyright 1930

Buyers' Guide

RAW MATERIALS

ALCOHOLS

U. S. Industrial Alcohol Co.

AROMATIC CHEMICALS

Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Schering Corporation
Ungerer & Co.
van Ameringen-Haebler, Inc.

BEESWAX

Theodor Leonhard Wax Co., Inc.
Will & Baumer Candle Co., Inc.

BIOLOGICAL CHEMICALS

Wilson Laboratories

BORAX

American Potash & Chemical Corp.

COD LIVER OIL

P. R. Dreyer Inc.
Chas. L. Huisking & Co.
Norwegian Cod Liver Oil Association

COLORS

Interstate Color Co., Inc.

CRUDE DRUGS

Bamberger, Bloch & Landesman, Inc.
J. L. Hopkins & Co.
S. B. Penick & Company

DENTIFRICE BASES

Iliff-Bruff Chemical Co.
Industrial Chemical Sales Co., Inc.
John & E. Sturge, Ltd.

ESSENTIAL OILS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Plaimar, Ltd.
A. M. Todd Co.
Ungerer & Co.
van Ameringen-Haebler, Inc.

FLAVORING MATERIALS

W. J. Bush & Co., Inc.
California Fruit Growers Exchange
Dodge & Olcott Company
P. R. Dreyer Inc.
Fritzsche Brothers, Inc.
Magnus, Mabee & Reynard, Inc.
Ungerer & Co.
van Ameringen-Haebler, Inc.

GELATINES

Coignet Gelatines

GLYCERIN

Colgate-Palmolive-Peet Co.
Will & Baumer Candle Co., Inc.

MEDICINAL CHEMICALS

Abbott Laboratories
Benzol Products Co.
Citro Chemical Co.
Dow Chemical Co.
Heyden Chemical Corp.
Chas. L. Huisking & Co.
E. C. Klipstein & Sons, Co., Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works, Inc.
Chas. Pfizer & Co., Inc.
Röhm & Haas Co., Inc.
Schering Corporation
Swann Corporation

MINERAL OIL

M. W. Parsons Imports
Schliemann Companies, Inc.

SOAPS

J. L. Hopkins & Co.
S. B. Penick & Co.
John Powell & Co., Inc.

VANILLIN

Fritzsche Bros., Inc.
Givaudan-Delawanna Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Works

CONTAINERS

ADHESIVES

Nat'l. Adhesives Corp.

BOTTLES

Owens-Illinois Glass Co.
Swindell Bros.

COLLAPSIBLE TUBES

Art Tube Co.
National Collapsible Tube Co.
New England Collapsible Tube Co.
White Metal Mfg. Co.

GLASSINE PAPER

Riegel Paper Corp.

VIALS

Kimble Glass Co.

CLOSURES

CORKS

Armstrong Cork Co.

LINERS

Armstrong Cork Co.

METAL CAPS

Aluminum Seal Co.
Anchor Cap & Closure Corp.
Crown Cork & Seal Co.
Ferd. Gutmann & Co.
Phoenix Hermetic Co.

MOLDING COMPOUNDS

Anchor Cap & Closure Corp.
Armstrong Cork Co.
Resinox Corp.

MACHINERY & EQUIPMENT

FILLING MACHINES

Alsop Engineering Co.
Arthur Colton Co.
F. J. Stokes Machine Co.
Stokes & Smith Co.
U. S. Bottlers Machinery Co.

LABELING EQUIPMENT

Liquid Carbonic Corp.

MIXING EQUIPMENT

Alsop Engineering Co.
Arthur Colton Co.
Mixing Equipment Co., Inc.
F. J. Stokes Machine Co.

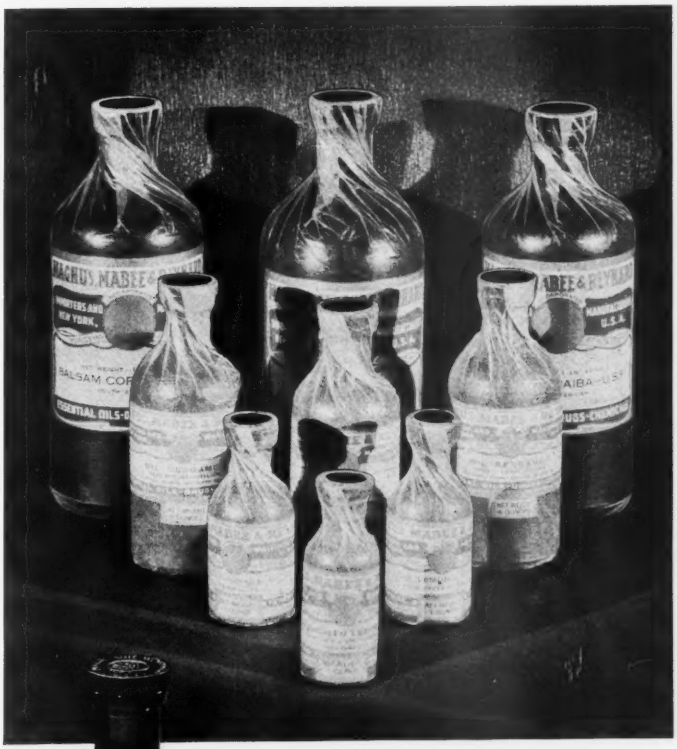
PACKING & CARTONING

Stokes & Smith Co.

PHARMACEUTICAL MACHINERY

Arthur Colton Co.
F. J. Stokes Machine Co.
U. S. Bottlers Machinery Co.

MM&R Packaged Essential Oils



Save You Money

Purchasing Essential Oils, etc. in bulk and repackaging for resale is a costly procedure. This loss can be converted by wholesale druggists into extra profits by stocking and selling MM&R Essential Oils and Balsams to the retail drug trade. Wholesalers packaging under their own label experience trouble, losses and the possibility of their packages and labels being incorrect in so far as recognized standards are concerned. Inaccuracy of weights, wrong type of bottle and closure, captioning, etc. create dissatisfaction and reflect to your detriment.

The MM&R Line is complete. Every package is a guarantee to you and your trade of the best quality obtainable, packaged as near perfection as is possible by a house with thirty-seven years of experience as a background.

MM&R Packages are as attractive in appearance as they are for perfection in quality. A special closure is used to guard the contents and to insure convenience to the ultimate consumer.

Your special label is affixed to each package under our special MM&R Package Proposition together with our label, and seal. Uniformity of quality and conformity with the standards of the U. S. P. and the N. F. V. are guaranteed.

Send in your order today for MM&R Essential Oils and Balsams, or write for additional information which will outline many advantages, i. e.,—current market quotations, trade discounts, advertising, etc., to be gained by handling the MM&R Package line.

MAGNUS, MABEE & REYNARD, INC.

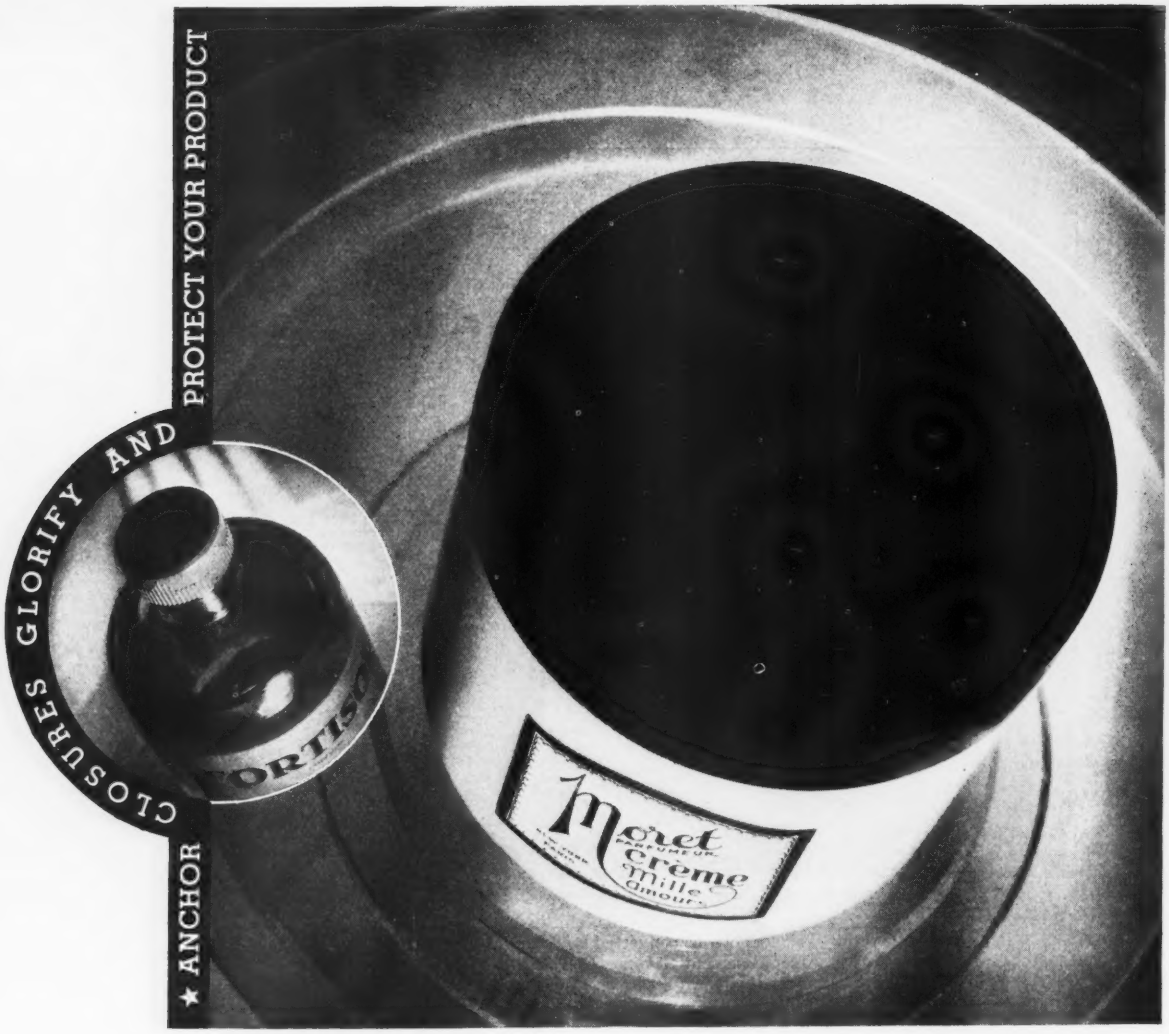
32 CLIFF STREET .... NEW YORK, N. Y.

Essential Oils
Aromatic Chemicals
Basic Flavoring Materials
Infused Oils
Perfume Oils
Mohawk Brand Oil Peppermint

M&R MAGNUS

Balsams
Oleoresins
Paragon Olive Oil
Natural Isolates
Terpeneless Essential Oils

MM&R essential oils in bulk for manufacturers of pharmaceuticals are of the same high quality and standards as MM&R packaged goods. Manufacturers: write for full details.



● LOOK INSIDE THE CAP... FOR HIDDEN VIRTUES

Anchor Molded Caps are smart looking, to be sure. But we do not claim to have a "corner" on a nice external appearance.

It's when you look inside an Anchor Molded Cap that really startling differences appear. Beneath its gleaming, lustrous surface there are mechanical features of design and construction that make it a finer and a more satisfactory closure.

Chief among these unique advantages is the liner retaining ledge and recess. This has a number of important advantages—to you.

1. Holds liner secure in cap during entire life of package—regardless of the nature of the contents or the number of applications and removals.
2. Permits delivery of caps to you completely assembled—ready to use.
3. Eliminates necessity of examining caps before application to make certain each is equipped with a liner.
4. Permits mechanical application of caps from automatic cap hoppers.
5. Permits use of full size liners which insure complete coverage of glass sealing surface.
6. Prevents liners from buckling, wrinkling and creeping.
7. Prevents leakage and breakage of caps due to buckled liners.
8. Permits free rotation of liners, thereby preventing injury to them from imperfections in the glass sealing surface.
9. Holding liners flat in cap insures uniformly tight seal and protection against evaporation, leakage, escape of aroma or volatile elements.

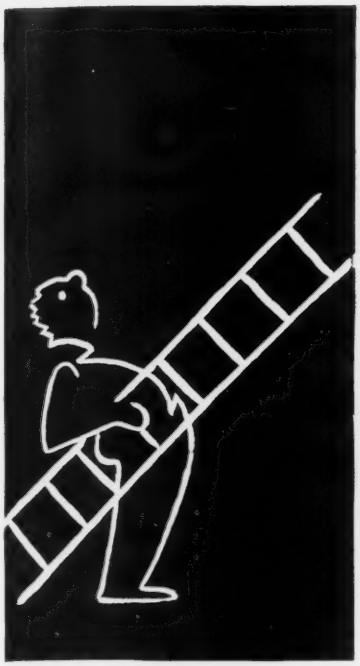
There are other superior qualities possessed by Anchor Molded Caps which are explained in detail in a folder available upon request.

★ SPECIALISTS IN MOLDED CLOSURES ★

Anchor Sales Representatives know sealing requirements. That's been their job for years. So, to the user of molded closures they bring this sealing knowledge...putting them in the fortunate position of knowing what the closure should do, as well as how it should contribute to the sales effectiveness of the package.

Anchor Cap & Closure Corporation
Long Island City, N. Y. Toronto, Canada
Branches in all Principal Cities

ANCHOR IS CLOSURE HEADQUARTERS



PICK YOUR OWN LILAC

Is it for a really choice extract? Then, of course, you want that finest of synthetic oils . . . Lilas Fleurs No. 7.

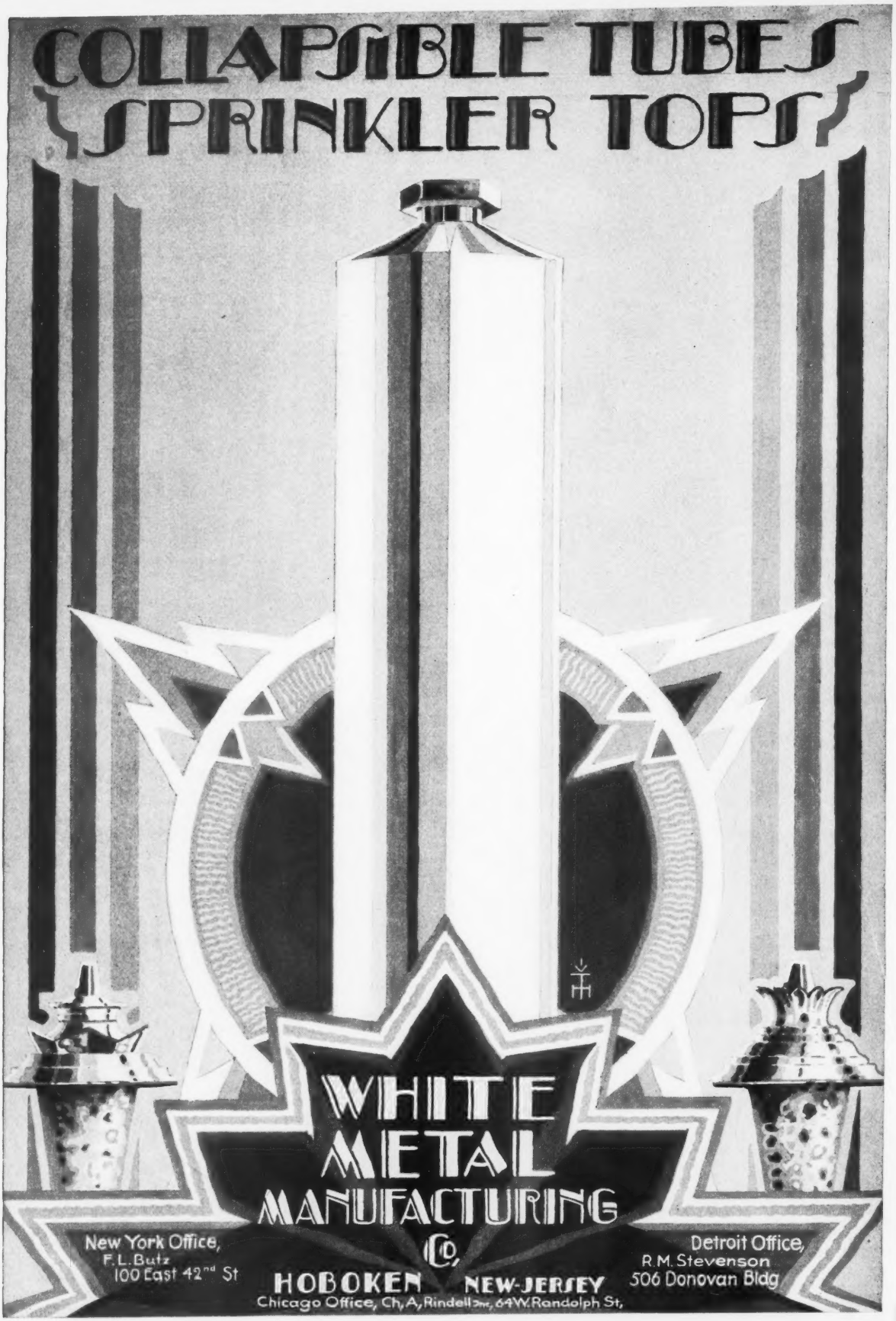
For a quality product of more moderate price? To be used in much the same manner as No. 7, is . . . Lilas Fleurs No. 24.

For a FULL line of popular priced cosmetics? There is no better value to be found at $9.50 the pound than . . . Lilas Fleurs No. 31.

SAMPLES WOULD INTEREST YOU.

GIVAUDAN-DELAWANNA INC.

80 FIFTH AVENUE NEW YORK, N. Y.


COLLAPSIBLE TUBES
SPRINKLER TOPS
WHITE
METAL
MANUFACTURING
Co.
HOBOKEN NEW-JERSEY
New York Office,
F.L. Butz
100 East 42nd St
Detroit Office,
R.M. Stevenson
506 Donovan Bldg
Chicago Office, Ch. A. Rindell Inc., 64 W. Randolph St.

LESS FRICTION with the Deep Hook-Shaped Thread

THE superiority of Crown Screw Caps is not limited to positive and greater sealing pressure. Another advantage of the Deep Hook-Shaped Thread construction is the elimination of all undesirable friction between the cap and glass threads.

Note how the Deep Hook-Shaped Thread contacts the glass at only one point. Note how much clearance there is between cap and glass threads at every other point. There is no interference between cap and glass threads except at the one point of contact where it should be.

Less friction means lower sealing cost, fewer imperfectly sealed containers. Less friction also means easier removal—a feature that wins greater favor with consumers.

NOTE THESE IMPORTANT ADVANTAGES

1. Deeper hook-shaped threads.
2. Positive and greater sealing pressure.
3. Less friction.
4. Easy removal.
5. Ability to seal maximum and minimum glass (without jamming or cocking).
6. Concentrated sealing pressure on sealing surface finish through location of sealing bead.
7. Better construction of wire edge (closed wire to prevent rusting). Uniform deep knurl facilitates machine application, etc.
8. New method of rolling deep thread to prevent metal stretching and consequent injury to lacquer and coatings.
9. Sanitary method of cap manufacture.
10. Inspection of all materials to finish cap.
11. Decorations resulting in more beautiful caps.
12. Service due to modern, up-to-date manufacturing equipment, warehouses located at convenient points, engineering department, chemical laboratory.

THIS BOOK IS YOURS FOR THE ASKING

Positive Sealing Pressure is the title of this interesting, illustrated book which has been prepared by CCS Engineers especially for you. It explains the tremendous advantages of positive sealing pressure and how it eliminates many sealing troubles. Every packer of products in glass will find it a valuable guide in the solution of sealing problems. Do not fail to send for your copy—now.

CROWN CORK & SEAL CO. Baltimore Md.

WORLD'S LARGEST MAKERS OF CLOSURES FOR GLASS CONTAINERS

It's all in the **CAP**

DEALERS DON'T HIDE *these packages*

INVITING packages get "front row" display. And why not? Retailers know that the well-dressed package moves faster. It sells itself—and so they give it preferred position.

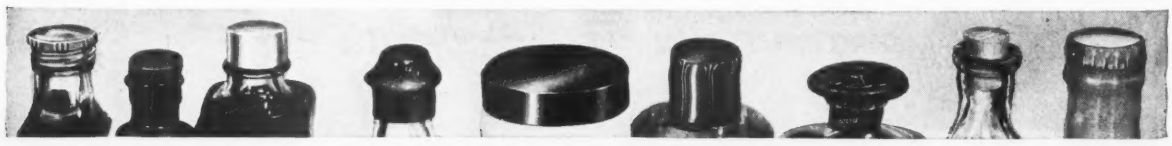
Armand knew it. Dorothy Gray knew it. Cutex knew it. They and a host of other manufacturers of *notably successful products have completed the charm* of a well-designed package with Armstrong's Artmold Caps and Jar Covers—the finishing touch of beauty.

We'd like to plan such harmony and eye-appeal for your bottles and jars. Design problems—closure, container, label, and all—can be solved for you on our drawing boards. Liner and sealing questions can be settled in our laboratories.

No obligation of course. Samples and prices on *request. Or, if you wish, send us a few of your packages* and full details of your problems. Armstrong Cork Company, 913 Arch Street, Lancaster, Pennsylvania.

Armstrong's Artmold Caps

Armstrong offers CORKS OF ALL KINDS . . . ARTMOLD CAPS . . . ARTMOLD JAR COVERS . . . EMBOSSED TOP CORKS . . . DAUBERS . . . CROWNS
DU PONT CELLULOSE CAPS . . . DU PONT CELLULOSE BEVERAGE BANDS . . . APPLICATORS OF ALL KINDS . . . RUBBER STOPPERS . . . CAP LINERS . . . BUNGS



Emerald Green Squares

Emerald Green Jars

Emerald Green Capsule and Tablet Containers

Emerald Green Containers —*new sales builders*

Owens-Illinois scores again by announcing three new glass packaging ideas which will be of interest to every pharmaceutical and proprietary manufacturer. They focus the *telling force of color*—an unusually beautiful emerald green—on your products' sales. These new emerald green containers —small squares for drops and other liquids, ointment jars, capsule and tablet containers—combine the smartness of today's design trends with strictly ethical appearance. Every one of these containers is as practical as it is handsome. They present no problems for convenient filling, capping and labeling. These new emerald green containers are available without caps so that you may take your choice of a wide variety of interesting color combinations. We shall be glad to submit samples and prices at your request. Owens-Illinois Glass Company, Toledo, Ohio

OWENS-ILLINOIS

BOTTLES AND GLASS CONTAINERS

"What a beautiful package—!"

Strange how a new "dress" changes an old product! How the sales of a long-established, taken-for-granted article shoot upward because the public likes its looks better in a new glass container!

No one has been quicker to realize this fact than manufacturers of proprietaries, toiletries and kindred products. Having decided that a new glass vial is the right package, the next decision usually is that it must be a Kimble Vial. For, after all, it is only natural that preference be shown toward the fastest selling line of small glass containers in the world. Every year over a million and a quarter gross of Kimble Vials leave the Vineland plant and step into important sales and merchandising roles in drug, pharmaceutical and perfume circles.

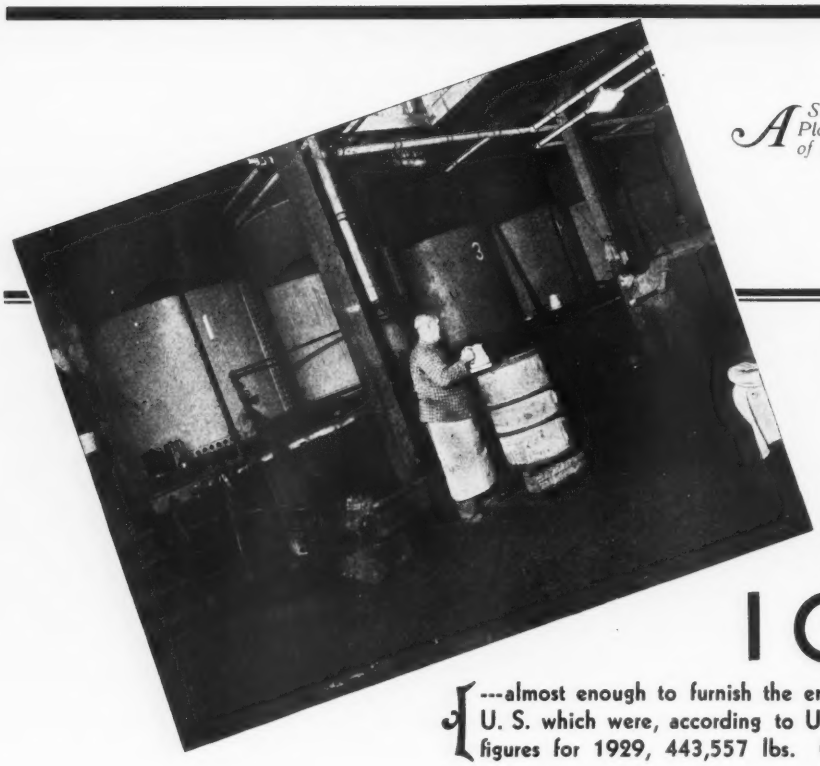
It pays to be modern in your packaging — to use glass wherever possible. And it pays real dividends in faster turnover and consumer acceptance to standardize on Kimble Vials, Ampoules, Serum Bottles and other small containers of glass.

Package in Kimble Glass — and sales take care of themselves.

KIMBLE GLASS COMPANY
VINELAND, NEW JERSEY.

BRANCH OFFICES:—
New York, 1440 Broadway — Philadelphia, 1616 Walnut Street
Boston, 131 State Street — Chicago, 402 W. Randolph Street
Detroit, General Motors Bldg.

SHEFFIELD
PRO CESS
PRODUCES
The B
SHEFFIELD
The
FACTORIES
BEHIND THE
TUBE
NEW ENGLAND COLLAPSIBLE TUBE CO.
PLAIN OR DECORATED
EASTERN OFFICE AND PLANT
2133 WALLER STREET
NEW LONDON, CONN.
PHONE - NEW LONDON 5319
WESTERN OFFICE AND PLANT
3123-36 SO. CANAL STREET
CHICAGO, ILL.
PHONE - VICTORY 4200
NEW YORK OFFICE
370 LEXINGTON AVENUE
CORNER OF 41ST STREET
PHONE - ASHLAND 7813-7814
1932
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER



A SECTION of the Mallinckrodt Plant devoted to the production of Iodine derivatives.

Capacity

30,000 lbs.

per month of ---

POTASSIUM IODIDE

---almost enough to furnish the entire requirements of the U. S. which were, according to U. S. Dept. of Commerce figures for 1929, 443,557 lbs. (latest figures available.)

FOR over a century, Iodine and its compounds have rendered remarkable service in therapeutics and industry. For about half of that period, Mallinckrodt has been identified with their development. The derivatives listed constitute the bulk of our Iodine compound production, although there are fifty-one in our entire line of Iodides. A complete catalog including those and some 1400 other chemicals will be sent on request.

Some of the Mallinckrodt IODIDES (51 in all)

- Acid Hydriodic
- Acid Iodic Cryst.
- Ammonium Iodide USP IX
- Arsenous Iodide USP
- Arsenous and Mercuric Iodide
- Barium Iodide
- Bismuth Oxyiodide (Subiodide)
- Cadmium Iodide
- Cadmium and Potassium Iodide
- Calcium Iodide
- Copper Iodide
- Ethyl Iodide (Ether Hydriodic)
- Gold Mono-Iodide
- Iodine
- Iodoform
- Iron Iodide
- Lead Iodide
- Lime USP Iodized Dark
- Lithium Iodide
- Magnesium Iodide
- Manganese Iodide
- Mercury Iodide
- Mercury and Potassium Iodide
- Methyl Iodide
- Potassium Iodate
- Potassium Iodide
- Potassium Iodo-Hydrarg
- Quinine Hydriodide
- Silver Iodide
- Sodium Iodate
- Sodium Iodide
- Strontium Iodide
- Sulphur Iodide
- Thymol Iodide
- Tincture Iodine
- Zinc Iodide Pure
- Syrup Iron Iodide

University of Md

An Editorial

Unfair Trading

From latest indications, Bruce Philip seems surprised that manufacturers in this industry are interested in their own welfare first of all. The president of the A. Ph. A. and counsel of the N. A. R. D. seems surprised that very few manufacturers attended his meeting in New York. He proceeds to pat on the back the few manufacturers who did attend, but he is plainly disappointed at the results of the conference.

Mr. Philip does not seem to understand the first principles of business as it is conducted in this day and age. One principle which Mr. Philip does not seem to grasp at all is that nothing is given for nothing. While Mr. Philip, at such a conference, would have liked to commit a large number of manufacturers to definite promises to the retailers, he would not have been able to offer any promises on the part of the retail trade in return. Mr. Philip also seems surprised that representatives of some of the manufacturing houses present refused to speak for their firms. He does not seem to know that matters of company policy are generally carefully discussed and voted upon by the executive committees and boards of directors of most manufacturing houses before they are put into effect. Also he does not seem to appreciate the possible violation of the law which might arise from a conference of this sort with everyone definitely committing his house.

We fail to see how Mr. Philip is going to arrive at any definite point by attempting to get the manufacturers to promise something when the retailers promise nothing. The example of a certain manufacturer's mineral oil brought out at the conference clearly illustrates this point. The manufacturer raised his prices on the West Coast in accordance with the desires of the retailers and then lost business because the retailers sold lower priced brands.

For a short space of time, Mr. Philip succeeded in breathing new life into an old subject. But it seems that Mr. Philip has merely revealed some facts which everyone knew existed. From that point on Mr. Philip seems to have nothing to offer and is apparently groping in the dark. Is it any wonder that manufacturers act in the manner which Mr. Philip decries ?

Meaning of Antiseptic

That the Food and Drug Administration has not the right to change the definitions of words in accordance with their own interpretation of what the public believes them to be, is the expressed opinion of U. S. District Judge Chesnut of Maryland. In ruling on the objection of the Food and Drug Administration to the B & M Remedy's use of the word "antiseptic," the judge claims that the use of the word is proper. He specifically states that the word has a much broader meaning than the meaning given to it by the Administration, and that, in fact, the word antedates antiseptic surgery and germicides and therefore cannot be restricted to this one confined meaning. He also emphasizes the fact that the word "antiseptic" signifies quality and not purity or strength.

It is a healthy sign to see the Administration reversed in one of its fanatical rulings. It is not to be expected that the department will have very many such cases if its officials know the attitude that the courts will take and also feel sure that the manufacturers will go to court. It has long been the feeling of drug manufacturers that the Administration has in many cases changed the definitions of words in a manner which is decidedly unfair to the manufacturers.

Although a word may have been in use for a long period, and in fact might be commonly supposed at the present time to mean a narrow, restricted phase of its original and true meaning, the actual meaning of the word actually remains the same.

• • •

Ten Years Ago

From our pages, March 1922

The Treasury Department has just issued instructions regarding the importation of salvarsan and neosalvarsan and prohibiting the importation by unlicensed firms.

The Aspegren Co. has been incorporated at Albany with authorized capital of $1,000,000.

Prohibition Commissioner Haynes has written to W. L. Crounse, representative of the National Wholesale Druggists' Association, in Washington, that narcotic orders sent in by salesmen over the telephone are illegal.

Latest communications from Spanish points indicate that attempts to form a selling agreement between the Spanish and Italian quicksilver interests, have proved a failure.

Frank McDonough of McKesson & Robbins, who returned last week from a month's trip through Europe, is not quite so optimistic in his views of conditions in England and France as other American business men who have been abroad recently.

George R. Merrell, Jr., son of George R. Merrell, president of the J. S. Merrell Drug Co., sailed from New York March 11 for The Hague, where he has been appointed the Third Secretary of Legation.

• • • New and Non-Official • • •

• • •

We Have A Reader!

Last month in this column we made the mistake of airing our mathematics in a short pep talk on "Pselling Psyllium." Not having been aired for some time, that is not since we left the little red schoolhouse in the hills of the Bronx, our mathematics was a bit moth-eaten, and we succeeded in dividing five million by 50 and getting 100.

Although this performance has been much admired by Professor Einstein and other leading scientists who have not yet been able to duplicate this mathematical feat, one reader clipped the item and attached the following note: "Pseems to me there's psurely psomething wrong here."

There was. We should have said 50 thousand drug stores instead of 50, which would have made it come out right. At least we think so.

We consider the mistake a happy one, though, for it disclosed the fact that this column has one reader. With this assurance, we can turn to our task with new enthusiasm.

• • •

If You Don't See What You Want . . . .

Our sympathies are all with the guy who wandered into a drug store and asked for one of those pink tooth-brushes he saw advertised so much.

• • •

R. I. P.

One of the better known P. A.'s contributes the following suggestion for a will. The soon-to-be-deceased merchant is giving final instructions to his lawyer:

"Fix it so that my overdraft at the bank goes to my wife—she can explain it. My equity in my car goes to my son. He will then have to go to work to keep up the payments. Give my good will to the supply houses. They took some awful chances on me and are entitled to something. My equipment you can give to the junkman; he has had his eye on it for several years—and I want six of my creditors for pallbearers. They have carried me so long they might as well finish the job."

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"Clean From America"

There is an old gag about "coming clean from Pittsburgh." But that is outmoded by the latest reports from Procter & Gamble. The firm announces that the consumption of soap in the United States has increased to twenty-five pounds per capita a year, an increase of two and a half pounds in two years. The average consumption in Europe is but four pounds.

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Harsh Medicine

The Liquor Control Board of Toronto has hit upon a scheme to prevent medicinal whiskey being carried around on the hip. Hereafter such spirits will be sold in triangular shaped containers.

That's typical of the usual package design expert's view of a practical package. Now Torontonians will have to develop inset hips to make room for the point. ?????

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Elementary, My Dear Watson

They are telling us that kissing would be more dangerous if it were not for the widespread use of oral antiseptics.

Our own belief is that the danger involved in kissing is in inverse proportion to the distance of the wife from the scene of the said osculation.

Varying Drug Effects

By Linn J. Boyd, M.D., F.A.C.P.

Different effects follow treatment with the same products depending upon the conditions. That effects other than the anticipated one should be studied is clearly indicated.

MODERN pharmacology and medicine up to recently has been chiefly interested in determining *the* effect of a drug: digitalis slows the heart, ether is an anesthetic, etc. Other directions of drug effects were considered paradoxical, accidental, and of no importance. On the other hand it has been noted that transient or reversely directed effects are exceedingly frequent if the observer is alert to their existence, in fact, no substance has been found as yet which does not display under certain conditions, an effect reversed to the usual and well known. These reversed or transient effects are termed phase effects.

Perhaps a single example will serve as an introduction to the subject. During the administration of ether as an anesthetic, one encounters at least two phases: an excitement or stimulative phase followed by a narcotic or depressive phase. For the purpose of this discussion the narcotic phase and the recovery phases will not be considered. Until recently the excitement phase has been regarded as an annoying troublesome period during the induction of anesthesia and certainly not an indication of anything useful. Entirely overlooking that the ether example is an excellent illustration of the Arndt-Schulz rule—that small doses stimulate and large depress—let us focus our attention upon the fact that reverse effects do appear. The depressed phase is used in anesthesia: to what possible use can the stimulative phase be put ? Naturally the answer is self understood, namely stimulation. We notice that to bring about the depressed phase, one uses large amounts of ether; further that if sufficient ether is used any one can be anesthetized; finally that it produces the opposite, that is, produces unconsciousness in the conscious subject. On the other hand to bring out the stimulative phase relatively small doses were used; again the best stimulation effects are brought about therapeutically when the patient has been previously depressed. For example the use of ether in cardiac failure, spirits of ether in fainting, ether in post-operative and other forms of bronchitis. Thus the first point should now be apparent: in place of *the* effect of ether, a knowledge of *all* the effects is scientifically necessary and therapeutically useful.

In order to bring this example a little nearer to the homoeopathic field, the following may be added: ether is a depressant when given in large doses. By employing the homoeopathic—simile—finding principle ether should be useful in certain conditions in which depression is a part. In support of this generalization is the fact that ether in small doses, under the condition of depression, is a stimulant. If we desired to extend this example of finding—by use of the isopathic principle—ether should be a remedy in ether bronchitis. It is unnecessary to add that it has proven so, and moreover in other forms of acute bronchitis.

One part of the example which has been previously indicated now deserves further mention: in one instance ether "stimulated" and in the other instance ether "depressed." Thus we see in addition to the question of dose, the condition of the body at the particular moment is equally important. Thus to use a well-known example, in certain forms of constipation, large doses of Rhubarb will give relief. Given a certain form of diarrhoea, small doses will often cure. Up to now we have hastily sketched three points: (1) drugs do have phase effects; (2) the phases differ with the doses employed; (3) the condition of the body is equally determining for the phase.

All of the above is so simple and generally admitted that it would seem unnecessary to write about it. However there is much more. Let us take another simple example: in all homoeopathic text books of materia medica it is stated that Sulphur is indicated

in certain forms of constipation and in certain forms of diarrhoea. Does this find its basis in that large doses of sulphur cause diarrhoea which is followed by constipation ? This would amount to the so-called primary and secondary effect of Hahnemann. Does it mean that small doses of Sulphur stimulate the intestine in the sense of Arndt-Schulz and that large doses depress.

It might mean both or neither. Take note of the following observation I place 50 provers on Sulphur 3x, a tablet three times a day. Of the fifty, five ordinarily have soft mushy morning stools, the consistency approaching a true liquid stool. Within a week these five report that the stools are normal. Three of the fifty state that ordinarily they are constipated and under the conditions of the proving, the stools have become normal. Thus we note that the same dose has been followed by variable effects. Finally 12 provers whose stools were approximately normal, develop diarrhoea. Thus in place of the usual statement that sulphur is a laxative we now have sulphur as a drug with constipating or reverse effects according to the conditions existing. In this way many of the contradictory statements in the materia medica become comprehensible. Up to now we were frequently at loss to know whether they represented "drug effects," "healing effects," effects of small or large doses, etc. Incidentally it may be mentioned that the above numbers are correct for an experimental sulphur proving which we are carrying on.

Normals or Abnormals ?

Let us now view the example from the pharmacological angle. The physician works with patients; presumably they are sick, that is, they are in one of many phases. The pharmacologist on the other hand works with normal tissue. Overlooking for the moment the misunderstood question that a guinea pig intestine is not the same as a human intestine, we note the fundamental difference of normal and diseased tissue. In this way we may take a common example from practice; the operative assault on an acute osteomyelitis is often followed by death in place of recovery in spite of the removal of the focus of infection. This is possibly due to a summation of two negative phases—the negative phase of infection and the negative phase—surgery. In the later positive phase of infection, surgery accomplishes wonders. In short: the effect of a drug in health is not a necessary indication of its action in disease.

With these generally appreciated introductory matters out of the way let us go one step farther. We now appreciate why many valuable drugs are no longer used by the medical profession. For example a pharmacologist is about to study the effect of a "bitter" substance upon the gastric secretion. He gives the substance to a dog and proceeds to measure the gastric secretion at regular intervals and finds, in comparison to the known gastric secretion of this particular dog, that there is no effect. Therefore the remedy is useless and therefore it should be discarded. If on the other hand the study had been made as follows a different result would have been obtained: the gastric secretion is studied in the normal animal; then a gastric secretion is studied in the same animal after the amount has been reduced by fatigue, poisons, etc.; finally a study made on this animal when the gastric secretion is impaired and the animal is given the drug. In this instance we note an effect. I have repeated myself here in order to stress another point. Many pharmacologists have attempted to study the Arndt-Schulz phenomena. This is extremely important for us since up to a few years ago, it offered the only logical explanation of the homoeopathic dose. But these numerous attempts to prove it often resulted in failure. The stimulating effect of the small dose could not be shown. Therefore the Arndt-Schulz rule has held invalid. But the rule has been misinterpreted or incompletely formulated: the stimulating effects of small doses often can be shown only under certain conditions, among which is depression.

Different Effects

Let us now take a simple pharmacological experiment. I decide to pass through the blood vessels of a frog, a solution containing 1:1000 alypin and every time I do this a narrowing of the vessel is observed. In another animal I perfuse a solution of 1:1000 psicain and each time a widening of the vessel is noted. Up to recently medicine would have been content with the statement alypin is a vaso-constrictor and psicain is a vaso-dilator. Now let us follow the experiment a step farther: the same solution is passed through these same vessels, only it lacks the alypin or psicaine. In washing out the drug, alypin causes extreme vaso-dilatation and psicain, vaso-constriction. In other words the effect of the drug at the time of entry into the cell (introductory phase) is different than at the time it passes from the cell into the solution (release phase). Does this explain some types of reverse effects ?

In place of the above experiment let us study the effect of strophanthin on the blood vessels. This drug when perfused through the ear or renal vessels causes vaso-constriction. Now in place of perfusion of the drug, a perfusion of Ringer's solution is used: the ear vessels are constrictly still more strongly, whereas the kidney vessels dilate. That is, the action of the drug was vaso-constricting on entry, but on exit was vaso-constricting on some vessels and vaso-dilating on others. Again a field of paradoxical manifestations become experimentally demonstrable.

Before leaving this subject it may be well to return to the subject of discarded drugs. If pilocarpine had been studied by the old method on rabbits' ears, it would probably have been discarded. With the newer methods, that is, washing out the drug, the

(*Continued on page 295*)

Price Packaging

Special packages of larger than regular size are designed by Elizabeth Arden and Dorothy Gray to eliminate Macy's New York Department store as a price cutter of the lines. Macy will sell six per cent. below, but will have to sell larger units.

AS MOST manufacturers of the industry know, one of the real sore spots in the distribution problem in the New York Metropolitan area is Macy's department store. Macy's advertisements have long stated that their prices are six per cent below the prices of other stores. Also the fact that another store is having a special sale is supposed to make no difference since Macy will claim to sell six per cent below the sale prices of the other stores.

But whether or not the statement as advertised is true in its entirety or not, the fact remains that the drug department of this store does raise havoc with retail prices of drugs and cosmetics. The prices of practically all standard advertised articles are cut sharply in a supposed attempt to keep the prices of items in this department six per cent below the other cut prices in the City. Refusal of a manufacturer to sell Macy makes practically no difference, as Macy picks the goods up in other places if it means going to retail stores and buying the items at prices which are higher than the goods are resold for by Macy.

While the entire retail drug trade of the New York area feels this competition on all items, and while the drug and cosmetic manufacturers feel it also as the result of the large amount of goods sold packed under Macy's own label, the other large department stores of New York feel the competition most keenly in cosmetics. This cosmetic price competition—which manufacturers have attempted to correct by many methods—has finally been adjusted by a method which means a concession on the part of all three involved—manufacturers, Macy, and the other department stores.

The plan of adjustment is being undertaken on two lines of goods which are distributed by the manufacturers only through selected direct retail accounts.

The regular two ounce Arden Cleansing Cream is shown alongside the Special Size Macy package of three ounces in the top illustration, and the regular four ounce Arden Skin Tonic is shown alongside the Special Size Macy six ounce package below.

These goods are those of Elizabeth Arden and Dorothy Gray.

While these two manufacturers are undertaking the plan at the suggestion of the New York department stores affected by Macy competition, and while therefore, these manufacturers bear no direct responsibility for the success or failure of the plan to improve the situation, the methods being used by the two manufacturers vary somewhat in detail. However, both plans involve the packaging of special sizes which will be sold only in Macy's store. Also these special sizes will be larger than the sizes sold through the regular channels. In the case of Dorothy Gray the sizes of creams ordinarily sold are 2, 4, 8 and 12 ounce. The packages of these creams sold by Macy will be 3, 6 and 9 ounce sizes. Lotions and other products will be packaged along the same lines. In the case of Elizabeth Arden practically the same practice will be followed.

However, in the case of Elizabeth Arden goods, the Macy packages will not to any great degree vary in appearance from the goods sold through the regular channels. The labels will be the same as the regular goods except for the fact that no distributor's name appears on the label, and the words "Special Size" are printed at the top.

Dorothy Gray Changes

In the case of the Dorothy Gray products differences between the regular packages and the Macy packages are planned so that they will be immediately distinguishable. Labels of the Macy packages will be somewhat different and will bear the statement that they are packed for R. H. Macy & Company. The cream line which is ordinarily packed in round opal jars will be packed for Macy in special mould square opal jars. The lotions which are now packed in square bottles will be packed in round bottles for Macy. Products now packed in square bottles will be packed in round bottles for Macy. Also those products of the line which are closed with glass stoppers for the regular trade will be closed with corks and viscose caps for Macy. And while the regular packages closed with corks are covered with *blue* viscose caps, the Macy packages will have *white* viscose caps.

Under the circumstances both manufacturers are conceding something in packing special sizes for Macy since the special packing for one distributor will increase the cost. Naturally the cost of packing for Macy will be greater for Dorothy Gray than it will be for Elizabeth Arden, due to the greater changes for the Dorothy Gray Macy packages.

As regards wholesale and resale prices on the items, Macy will pay exactly the same price as other distributors are paying per unit of quantity. In other words, Macy will pay for a three ounce jar one and one-half times the price that the other distributors pay for the two ounce jar. This means that the retail prices of the regular and special sizes will be exactly in proportion as to quantity except for the fact that Macy will be permitted to sell at six per cent below these retail prices.

While the Dorothy Gray Macy packages will not be ready until April, the Elizabeth Arden special sizes are now being sold in the Macy store. As a means of definitely identifying their goods, Macy stamps the special sizes of Elizabeth Arden packages with the words "Retailed by Macy's", although the words "Special Size" would convey the same fact to those who know. Such stamping will not be necessary with the Dorothy Gray packages since they will have Macy's name printed on the label.

Price Comparison

The two ounce jar of Arden cleansing cream illustrated sells for one dollar at the regular department and drug stores. The Special Size cleansing cream, which contains 3 ounces sells for $1.41 in Macy's. It can be seen that the three ounce should be priced at one-half more than the two ounce jar or $1.50. But with the Macy six per cent. deducted this price comes down to $1.41.

The Arden skin tonic does not figure so accurately. The 4 ounce bottle illustrated sells in the regular stores for 85 cents, while the six ounce special size sells in Macy's for $1.17. Adding fifty per cent. to the 85 cent price of the four ounce bottle, we obtain a price of $1.27 for the six ounce, which less six per cent becomes $1.19. Macy's price is 2 cents below this figure.

It is felt that the plan not only definitely commits Macy to firm retail prices on the lines, but also commits Macy to sell at higher prices than any other distributor, since the small sizes of the various items—which naturally are the lowest priced packages in the lines—will not be available at Macy's.

The reactions of sales-girls in the stores is interesting. The Macy salesgirl said that she had great difficulty in explaining to customers how the prices are arrived at and that Macy is selling six per cent. off. After it is explained, she said, the rest was easy. A salesgirl in a Fifth Avenue department store, however, thought that the Fifth Avenue stores would suffer for the reason that heretofore, she stated, some days one could get what one wanted in the Arden line in Macy's, while the next day Macy would be out of the item. Other opinions tend to the thought that Macy's price will not attract for a larger size since a lower price is only natural for a larger size. Also one can buy still larger sizes at the regular stores (four ounces of cream for example) and obtain a still lower price. One manufacturer observing the experiment ventured the opinion that the change in the Dorothy Gray packages would be likely to remove the price consideration on the part of the buyer, since many would consider the Macy goods of this line as different from the regular line.

The extent to which these manufacturers have gone in previous efforts to control the retail price situation

(Continued on page 295)

Glass Durability

By W. R. Lester*

Mr. Lester points out some of the errors encountered in the testing of glass for durability by the "solubility tests."

AT THE present time a good many pharmaceutical manufacturers are using or adopting so called "solubility tests" for the purpose of preventing the use of glass unsuitable in composition as containers for certain pharmaceuticals. It is unfortunate that the originators of some of these tests were not more conversant with the physical properties of glass, especially in regards to the action of water and other liquids upon glass surfaces. It is the intention of this article to point out a few of the errors that are encountered in the testing of glass in this manner and to suggest methods which will give results that are more indicative of the true state of affairs.

The remarkable resistance of glass to the attack of various liquids is a property shared only partially by the noble metals and makes glass an ideal material to use for pharmaceutical containers. However, as there is nothing that is absolutely insoluble, it is to be expected that glass will in time show some disintegration if kept in contact with liquids.

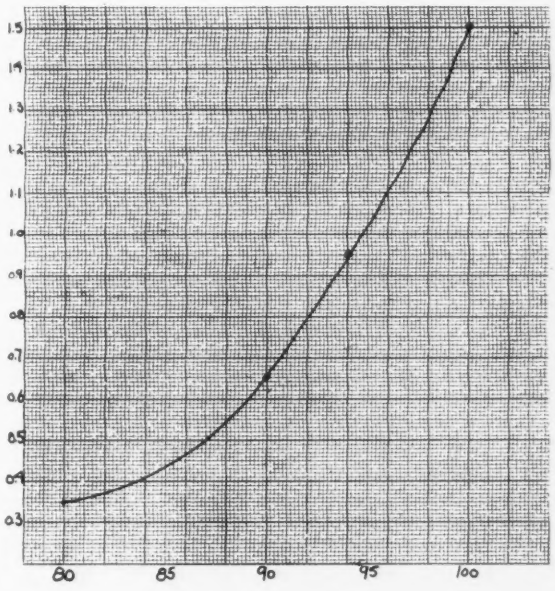
The ordinary soda lime silica glasses used as containers are complex mixtures of silicates. The action of water or other liquids upon silicate mixtures is not one of solubility as is ordinarily thought, but is a process of decomposition. This may be easily demonstrated by the use of a simple glass composed of only silicate and sodium oxide. A glass of this composition is a sodium silicate and may, under suitable conditions, be entirely decomposed by the action of water into a solution of sodium hydroxide, leaving a residue of silica. The products of the decomposition of the more complicated soda lime silica glass will consist of a solution of sodium, aluminum, calcium, and magnesium in water and which probably are in the form of hydroxide along with some silicates.

Unlike certain metals the decomposition products of the soda lime silica glasses are not toxic, but in some cases may destroy the therapeutic value of the preparation. This is evident in the case of serums and anti-toxins where the alkalinity of the solution must not exceed a certain value and a glass of special composition is required. The therapeutic value of the majority of pharmaceutical preparations is not affected however by the decomposition products and the suspended matter in the preparation resulting from the decomposition of glass of poor durability would result only in a loss of sales appeal.

There is required then two general types of container, one of which requires a glass of good durability and the other a glass of fair or moderate durability. The following discussion applies equally well to both types of glass.

If the measurement of glass durabilities was a type of solubility determination such as the determination of the solubility of sodium chloride in water at 25° C., much trouble in the interpretation of the results would be avoided. As glass is not a definite compound, but is a complex mixture of silicates which will be exceedingly variable due to the many different types of formulae from which even the soda lime silica glasses are produced, it is easily seen that the physical properties, including durability, of different source container glasses will also be variable.

The decomposition of the soda lime silica glassef in commercial use is exceedingly slow at ordinary temperatures and its determination by the means os long period storage tests, although being the ideal test, is rather long and costly. At elevated temperatures the decomposition is greatly accelerated, and



The curve shows the effect of temperature on the durability reaction rate by titrating the water solution after a 48 hour period. Vertical scale is cc. N/10 HCl reg. Horizontal scale is temperature, degrees C. This glass showed no decomposition after three months at room temperature.

*Maryland Glass Corp.

the majority of durability tests are run at temperatures higher than the room temperature. Figure I shows the acceleration in the rate of reaction due to an increase in temperature in the range of 80° C. to 100° C. It is seen that as the temperature becomes higher, the increase in the rate of reaction is very much greater. It is absolutely necessary in the testing of durability by the means of increased temperature to maintain a standard and constant temperature in order to insure accurate results. This is particularly important in the case of tests where a a definite durability standard is set.

Close control of the temperature may be best obtained by the means of thermostatic controlled constant temperature baths. A good bath will keep the temperature constant to within about 0.5° C., although differences of as high as 1° may be found between the top and bottom of the bath. In any case, it is best to thoroughly explore the bath by the means of accurate thermometers placed at various depths and positions in the bath. In cases where it is not absolutely necessary to maintain this degree of accuracy, a constant temperature electric oven may be employed. The temperature variations will be greater, of course, in the oven than in the bath, and this must be taken into account when interpreting the values obtained through their use.

Another high temperature method of testing is by the means of an autoclave working under high pressures with a resulting increase in temperature. Here again it is very important that a constant and standard temperature be employed and the autoclave thoroughly investigated for temperature differences.

The interpretation of the rates of reaction at room temperature from the determination made at a high temperature is a difficult task and it is usually the practice to class the durability of a glass by its high temperature reaction rate. This is not always a wise procedure as glass from different sources, or even from the same source, may show variable rates of reaction when tested at high temperatures while the room temperature durability or the durability that determines the suitability of the glass in use will be well within the limits. This is shown clearly in Table 1[1] ([1]The Chemical Durability of Glass, W. E. S. Turner, Int. Crit. Tables Vol. 2).

Table 1

Action of Water on Flasks

Glass Index No.	*Alkali extracted 10^{-3}mg*		*Autoclave*
	8 Days at 20°C	*3 Hrs. at 86°C*	*mg. Loss 4 Hrs. at 196°C*
C/1	2.5	2.7	23.7
C/4	8.9	28.2	17.2
C/7	14.5	45.0	51.3

The results for glass C/7 are what one would expect by increasing the temperature, but glass C/1 although being more durable than glass C/4 at room temperature, would be classed as less durable by the autoclave test.

Another method of accelerating the rate of reaction is by the means of alkaline reagents, usually sodium carbonate or sodium hydroxide, in the place of water. Table 2 shows the effect on the rate of reaction by the use of water and other reagents. With some glasses there is a decided differential effect which must be taken into account when making comparisons.

Table 2

Loss in weight mg/100 cm² surface

Glass Index No.	*Water 3Hrs. Steam*	*2N NaOH 3 Hrs. at 100°*	*0.1N NaOH 3 Hrs. at 100°*	*2N Na_2CO_3 3 Hrs. at 100°*
C/26	3.30	129.2	21.4	30.7
C/29	0.30	92.2	20.0	30.1
C/30	0.28	97.4	20.7	27.7
C/31	0.25	79.8	18.0	24.7
C/32	0.22	94.6	20.6	26.0
C/33	0.25	104.0	17.5	27.7
C/34	0.24	78.6	15.3	36.0

As mentioned above the ideal test for any glass is a long period storage test. As this is seldom possible, a high temperature test employing the material that the glass is to resist should be adopted for control testing of glass from the same source. If a test of this sort is run at various temperatures, a curve may be drawn that will give some indication of the durability of the glass at room temperature. With such a curve a new glass may be tested in the same way and a fairly good comparison of the glasses may be made.

As the decomposition of the glass is rarely carried to completeness in these tests, the property that is measured is the rate of reaction. This rate is dependent upon the surface area of the glass exposed to the corroding agent. It is therefore impossible to compare different style or different capacity containers by the durability test unless the results are based upon a standard surface area. As an example of the effect a difference in surface area has on the results the following case is cited: Two bottles, one of 4 oz. capacity, and the other of 12 oz. capacity, but identical in chemical composition, were tested and the rate of reaction measured by titrating a known volume of the water solution. The results of this test indicated a higher durability for the 12 oz. container, but when a test was run on the crushed glass the durabilities of both size containers proved to be identical. The determination of the surface area exposed is in most cases very difficult, and in cases where a variety of containers are to be tested separate standards on each type container must be adopted.

The following test is useful for comparing the durability of different glasses. The glass is crushed and sieved. The material passing a No. 20 sieve but retained on a No. 30 sieve is taken for the test. The sample should be examined under a low power microscope and all long splintery particles rejected, making an attempt to insure uniform grain size.

(Continued on page 282)

Iodine's Market

The first price change in iodine in over a score of years is a sharp reduction apparently to meet Japanese competition. What other competition threatens Chile, and is the market stable as yet?

DURING the month of February, this year, the price of iodine offered by Chilean producers was reduced in price by 91 cents per pound, bringing the price of this important chemical element to $2.98 per pound. For those who do not catch the significance of this occurrence, let us state that this the first change—either up or down—in the price of Chilean iodine since many years prior to the world war. Never has the price been lowered in all these years, and during the trying times of the war and post war periods, when most essential raw materials were a premium, the price of iodine was not advanced. All of which leads to the conclusion that the Chilean producers of sodium nitrate, who produce iodine as a by-product, have for many years enjoyed a very satisfactory profit from their iodine business.

Up to a few years ago this country was entirely dependent upon Chile for its supplies of iodine. It is true that during the war some iodine was produced on the Pacific Coast as a by-product of a war time industry which produced potash from kelp. However, this industry passed out of existence as soon as potash was again available from Germany, and from that time until the new developments in this country a few years ago, this country obtained all its iodine from Chile.

During 1929, however, an entirely new source of iodine opened up in this country. This was the extraction of iodine from the brine which gushed forth from the oil wells in California. The iodine was extracted from the brine by activated carbon, and was subsequently recovered from the carbon. One large manufacturer and distributor of fine and medicinal chemicals obtained most of its supplies of iodine from this source for some time, although it is now reported that this fine chemical manufacturer has terminated this arrangement, and it is also reported that the iodine producing plant in California has ceased operations.

Were it not for the fact that this West Coast plant shut down and the fine chemical manufacturer terminated the arrangement both prior to the reduction in price by the Chilean producers, it might seem as though the competition from this one plant had been sufficient to bring about the price reduction. However, there are other competitive factors both in this country and abroad which indicate that the price reduction probably would have been necessary whether or not the West Coast plant ever existed.

Iodine Imports

1922	**352,557**
1923	**273,338**
1924	.....
1925	**246,474**
1926	**711,291**
1927	**926,492**
1928	**720,766**
1929	**627,162**
1930	**493,587**
1931	**278,713**

As a matter of fact, Chile with its by-product iodine, of which it has an extremely large surplus many times its production and which is not even recovered, has not held a dominant position in all the countries of the world. Japan has long produced her own iodine from kelp. The cost of production of iodine in Japan has been placed by the Department of Commerce at 5.50 yen, which when the yen was at par was approximately $2.75 per pound. This figure was further reduced by by-products obtained in the production of iodine from kelp to 4.59 yen or $2.30 per pound figuring the yen at par. During the time when the yen was at par, iodine sold in Japan at 9 to 9.50 yen, or $3.25 to $3.50 per pound. It is evident that the Japanese producers of iodine enjoyed a considerable profit in their domestic business, and probably they were unwilling to forgo this in an attempt to go after export business in competition with the Chilean producers.

However, with the yen quoted today at approximately 33 cents per yen instead of par of 49.8 cents per yen, the story is different. The present cost of producing iodine in Japan, translated into United States currency at the present rate of exchange is $1.82 per pound not allowing for the sale of by-

products, and $1.52 per pound deducting the value of the by-products. Also the selling price of iodine in Japan of 9 to 9.50 yen would be $2.97 per pound.

From this observation it would seem that the Chilean producers have reduced their price of crude iodine as a means of meeting the declining price of Japanese iodine rather than as a means of meeting the price of any American production of iodine—particularly since the American iodine was never offered openly in the market and only caused a loss of business to the Chilean producers in one of its large accounts.

While the Chilean iodine price is today on a par with the price of the Japanese iodine, the cost of Japanese iodine still makes probable further sharp reductions in the selling price of iodine should Japan as part of a national movement attempt to ship large quantities of their products to this country as a means of obtaining gold and credit with which to obtain supplies to carry on its war activities.

Other Factors

But while the price cut of the Chilean iodine seems to be chiefly aimed at the Japanese iodine which has been freely offered in this country, there are other factors in the domestic situation which make the price cut significant. That is, the domestic developments might be partially or completely checked because of the move on the part of the Chileans apparently made to meet Japanese competition. These developments have to with a large manufacturer of medicinal as well as industrial chemicals who has for the past two years had a development in the neighborhood of Shreveport, Louisiana, for the production of potassium iodide and iodine. This manufacturer is reported to be making a small amount of material which is being sold to one account. This process has been quite in the development stage for some time but no definite information has come as to whether big things should be expected of it.

Another development has been anticipated from one of the large petroleum products companies of this country. This company some months ago formed a salt company subsidiary which was to produce iodine and bromine from oil well brines. While nothing definite has come to the attention of the trade in this respect, it is generally assumed that this company will not be stopped in its progress if a proper cost basis of the products can be found.

Still another development instigated by one of the large pharmaceutical manufacturers of this country has cut into the Chilean business on iodine. This is understood to be manufacturer importing copper iodide from Java and is obtaining its iodine from this product. Prior to the enactment of the present tariff act, this manufacturer was attempting to obtain the co-operation of other large consumers of iodine with a view to placing copper iodide on the free list. Whether or not other consumers of iodine were favorably inclined toward this view or not does not matter, the fact remains that the tariff act of 1930 placed crude copper iodide on the free list and thus allowed this manufacturer to obtain his iodine supplies from an entirely new source.

And while the United States is rapidly seeking and obtaining sources of iodine other than Chile, other countries of the world are busy making themselves independent so far as iodine supplies are concerned. Russia, Norway, Italy and other countries have taken such steps as necessary to develop their own iodine industries even to the point of placing heavy tariff levies on iodine imports.

Under the circumstances Chilean producers of iodine are hard hit, and it is natural that they should take steps to protect their markets. But although a sharp price reduction has apparently brought the price of Chilean iodine down to a par with the competing sources which threatened most, there are still probabilities which could easily force a still further price reduction. Resumption of production in this country in the West Coast plant together with other domestic sources still threaten. Also the Javanese copper iodide source might spread if it still proves an economical source at the new price level for the Chilean iodine.

In any event, iodine sources have shifted somewhat and are apt to shift to a greater degree. This important chemical element seems to be in the stages of a new development which might result in a more extensive use as its price declines due to a greater number of sources being tapped.

{ Industry's Books }

The Chain Store Boon or Bane ?, by Godfrey M. Lebhar, 206 pages, Harper & Brothers, New York, $3.00 net.

An addition is made to the fine series by Harper & Brothers on the chain store. In this particular volume, the editor of "Chain Store Age" answers the criticism of the chain store. He finds it good for the country at large that the chain-store methods are to some extent replacing individually owned and operated stores. He shows why the old system fell down and why the chains have grown. He discusses the chains with reference to the community and the country generally and discusses the monopoly angle of the problem. Although distinctly open to the accusation of bias and propaganda, this book should nevertheless be of interest to every drug and cosmetic manufacturer.

Compilation of Laws, 751 pages, Standard Remedies Publishing Co., Washington, D. C., $5.00 net.

A digest of state, federal and Canadian laws relating to foods, drugs, pharmacy, poisons, narcotics, insecticides, fungicides, caustic acids, weights and measures, stock medicines, prohibition, alcohol and kindred laws. An extremely valuable reference work for the manufacturers in this industry and one that should be immediately available for ready reference on legal points.

Vegetable Fats and Oils, by George S. Jamieson, 444 pages, The Chemical Catalog Co., Inc., New York, N. Y., $6.50 net.

A complete reference work in regard to vegetable fats and oils. Divided into three classes for convenience in handling—non-drying with iodine numbers up to 100; semi-drying with iodine numbers up to 130; and drying class with iodine number over 130.

Label Personality

That design, shape, and place of application of the label can entirely change the package appearance is too little appreciated.

MUCH has been said about the shape and size of the container; yet how vastly important is the label in developing attention value and in finishing off the effect of the whole design. The label is the focal point of the package. From it as a point of interest the eye travels and takes in the whole package. In short it may be called the "center of interest" in a package. This is true even when the name of the product is not printed on the face label itself but is printed on the neck band or else on a separate label. Take the Edco package in the accompanying illustration for instance. The eye is attracted by the central triangular label and then travels downward to the name Lavender at the bottom of the bottle.

In scanning a great many packages both new and old it is clearly evident that most of them, if not of conventional design, are conventional in shape. We realize of course that many practical operating conditions are responsible for this. But without impairing plant efficiency it is possible to depart from conventional shapes as the accompanying illustrations show, and, indeed it may often be desirable to do so.

The final touch is given to the package by the label. The effect it will give depends upon its color, its shape, its position on the bottle, and to a certain extent the materials out of which it is made.

The La Lasine bottle is a good example of the conventional in shape. Attention value is secured for this package by means of color and size. The colors are yellow, orange and black against a background of light yellow—the color of the preparation itself. The size of the label, being somewhat larger than usual

for this type of preparation helps to increase attention value; yet, despite this it is not out of proportion to the size of the bottle panel upon which it lays. This label, incidentally, is ideal for any kind of machine handling.

Going to the opposite extreme to the Preféré bottle label, size is cut to a minimum and an off-center position in the upper right is selected to impart an air of distinction and reserve. In this case the evident purpose is to accentuate the fine lines of the container and to allow the clear, brilliant pink lotion to play a major part in claiming attention. The label is silver foil; the lettering embossed in black.

There can be no question of the attention value of the familiar Rem bottle with its red bulls-eye and block lettering. The body of this label is in dark blue so as not to interfere with the compelling effect of the red circle, a device which is part of the carton design also.

The Slendabalm label is representative of the trend toward unconventional shapes. The sharp inverted triangle and the fine points of the female nude combining to claim attention and to fix the visual image of the package. This effect is accentuated because the white background of the label is in striking contrast to the dark pink lotion which the bottle contains.

Shu-Care is another example of a triangular label in black, blue and white. The shape of this label complements the lines of the container, the whole effect being at once striking and readable even at considerable distance.

The shape of the bottle is carried out in the shape of the Eternal Youth Oraseptic Mouth Wash label, which is silver foil printed in black and only very slightly embossed. This package has unusual attention value because the larger silver area of the label is accentuated by the brilliance of the dark red background of the lotion. The embossing of this label, being shallow, does not cause the labels to lock in the label magazines.

One of the interesting features of the Edco packages is that a uniform face label is used throughout their entire line of several fragrances (for room deodorizing purposes), each fragrance being differentiated by means of a separate name strip and also by means of the colors of the various products. The lavender illustrated is a luminous purple which tends to make the labels stand out.

The customary wrap around label is given an added touch of distinction and enhanced attention value in the Primrose House Rose Leaf Cleansing Cream jar. The label does not as usual fill the entire area between the beads, thus giving the effect that the center oval is superimposed over a body band. The label is in buff decorated in black with the Primrose House idea suggested by a primrose door.

A very radical departure in shape and position is effected by the Rex Perfumo label which lies in a debossed panel of the same shape. The sweep of the lines converging at the apex of the label imparts an unusual breeziness to this design. It appears that this label might have been improved by placing the name Rex at the Apex of the label so that the converging lines would terminate in the name of the product.

Black, white and gold employed in the design of the Cavalier, bottle secure an effect which is at once rich and striking. The lotion is white, the label black and gold, the contrast between the lotion and the label being so striking that the label seems almost to stand out from the container.

Cutex Hand Cream, a new product typifies dignity and richness in design, the whole package carrying the Cutex colors of black, old rose and gold. In this package the shape and position of the label is a departure in cream jar label design. This label has been very carefully placed to complement the fine lines of the colored glass jar. The jar being a light cream color affords a contrasting background to the jet black of the label.

The Blue Bird Lotion bottle exemplifies something new in shape and position of label. The kite shaped label is placed high on the bottle on a raised panel of the same shape. Here attention value is secured less by the colors and design of the label which are subdued, than by the shape and position of the label.

Woodberry's Tar Shampoo offers a contrast in its inverted set backs to the more pronounced set backs on the Facial Freshener bottle. Here reliance is placed upon geometric modern designs employing silver bronze and black, and simple lettering.

In presenting the foregoing examples of label design we realize of course that from a machine labeling standpoint some of them may be a little too extreme for comfort to the plant manager, but many of them are at once distinctive and practical to handle by machinery. This we submit is the desideratum of label design.

Editor's Correspondence

Wants Article Distributed

Editor, Drug & Cosmetic Industry,

Sir:

I want to congratulate you on the editorial appearing in the December issue, entitled: "Why Some Manufacturers Favor Price Legislation."

So important do I believe the subject to be that I am writing you at this time to suggest that you prepare reprints and send these to manufacturers, members of Congress, and others who are, no doubt, interested in the matter.

The subject was indeed well presented and should receive further distribution.

Very truly yours,

Iodine Educational Bureau, Inc.

J. J. Nichols, Director

Ten Cent Beauty

FOLLOWING up the excellent reception given to its Faoen extracts, Park & Tilford, Inc., has extended the line of ten cent items to include cosmetics. This line is being marketed exclusively through the larger department chains throughout the country which have fifty units or more, such as Woolworth, Kresge, Grant, etc.

The line of products now offered at a ten cent price includes two orders of perfume, four shades of face powder, three shades of lip stick, a cleansing cream, a cold cream, a skin lotion, and a skin tonic.

The products are all very attractively packaged. The opal cream jars are closed with bright brass covers, and the lotions are closed with plastic caps after the manner of the original perfume packages. The dominating color of the line is blue, and the lip stick is blue, the cover being of the same shape as the plastic caps of the perfumes and the tops of the lotion bottles.

While the effective work done in the packaging of the items speaks for itself, the quality angle of the products is particularly stressed in the displays in the stores and in the very striking window displays which the stores are giving the line. The statement is made that the products selling from one to three dollars have been analyzed by chemists and that the Faoen line is at least equal in quality to those products selling on the market at these higher prices. The portion of the items given in the Faoen line appears to be generous for the ten cent price although no comparison is invited in the displays on this point as it is invited on the quality angle.

The merchandising of such a line strikes a distinctly new note in the cosmetic market. Here is a manufacturer definitely manufacturing a line to sell at an exceedingly low price, yet the line is on a quality basis as far as ingredients are concerned, and is packaged in a manner which implies that quality is present. There is nothing cheap-looking about any of the packages, and for the amount of money available to do the job, the results are quite surprising.

Building Packages

Various phases in package construction take precedence over purely artistic considerations. Practicability from the point of view of the maker of package materials, the maker of the product to be packaged, and the user of the product are paramount.

By Francis Chilson

IN MUCH of what has been published on package design there is an underlying assumption that the problem is purely an artistic one, modified by merchandizing objectives. It is all this and more. Perhaps, indeed, the purely artistic element may be the least important phase, as many successful packages violate all artistic values. But what are the fundamentals of successful packaging ? Why do some packages succeed and others fail ?

The first fundamental is usually said to be color. Color is necessary to enhance attention value; to aid in identifying the line or individual package; and to arouse desire. It is manifestly impossible to select a color scheme that will long remain unique. Distinctiveness is achieved not so much from color as from design—ie., the manner in which the color or colors are employed. Over-emphasis on attention value may lead to selection of colors that clash and appear too gaudy. Over-emphasis on color is, on the other hand, apt to result in packages that are drab or lacking in distinction.

As a result of over-emphasis on color itself a curious dogma has been given wide currency, namely; that the color scheme *must* always suggest the product. This may lead to monotony, and a uniformity among different lines carrying the same product that emasculates the purpose for which packages are intended.

The assumption that a color can actually suggest the product is open to many objections. In the first place if the consumer is not familiar with the product no color can suggest its nature. In the second, if a person is familiar with the product, he doesn't need color to suggest it. In the third, the assumption that color alone can suggest or identify a product is crediting the public with an interpretative instinct which it does not possess. Moreover, it discounts the identifying power of the name on the package and also the character of the design. Finally, many different products are identical in color. When the product is marketed in an opaque package there is little doubt but that the suggestive color does aid in arousing desire *after* the prospective purchaser has *identified* the package by means of its name or distinctive design. Obviously, if the product is merchandized in glass there is little need to suggest the product when it may itself be clearly seen. When, however, the color of the product in a glass container is used as a background for the label or the cap the result is usually harmonious and pleasing but may lack attention value.

Color like other phases of packaging has its practical aspects, which must be taken into consideration. There are questions of chemical reaction, printing, fading, and durability in production and on display, all of which are too important to be merely outlined and will be left for subsequent treatment.

Assuming that a color scheme has been selected which will meet artistic, merchandizing and all other practical considerations, the next element to be considered is design.

Design is perhaps the most important fundamental of package art. It is really more than a fundamental: it is the sum total of composition. It embraces arrangement of selected colors in geometric or pictorial forms; shape of container and its various component parts; lettering; typography and so on.

So much has been said and reiterated about color in packaging, that for some people selection of the right color scheme represents the whole of package design. They overlook the fact that a package can have the right colors and yet have no individual character whatever. Some artists are color experts and assume that all the objectives of packaging can be met by color alone. This bias is reflected in the fact that the work of such artists sometimes shows a startling lack of design sense; their cosmetic designs resemble their food designs. Color after all is only one element in design. It is, forsooth, possible to design very lovely packages without any color at all, by using black and white.

The designer can secure his color effects in two general ways: by analogy and by contrast. In the former instance he will select darker shades of the principal color and touches of related colors; in the latter unrelated, contrasting, and often clashing colors. The former method is perhaps more desirable for designing packages which must be "lived with"; for

The delicate touch of the fine artist is manifested in Inecto Notoxide, Charles of the Ritz Cold Cream, Pinaud's Hand Cream, Roger & Gallet Face Powder, Gemy Talcum, and Leather Vita.

The Inecto bottle is noted for its fine lines, and, further, Inecto, Charles of the Ritz Cold Cream, Pinaud's Hand Cream, Leather Vita and Bathdora are unusual examples of fine, expressive, decorative lettering. Roger & Gallet Face Powder, Amolin, Packer's Olive Oil Shampoo, and Synol Soap are excellent examples of pleasing color schemes. The Shampoo and Synol bottles are examples of consumer convenience, both having sprinkler tops and finger grips which prevent slipping soapy hands.

Rem, Mistol, Alcorub typify attention value—plus. Mistol is an unusually effective package because of pictures which perfectly illustrate the use of the product. A man and a lady are taking the same treatment on opposite sides of the package.

Finally these packages are not only effective from art and merchandising standpoints, they are made from economical materials and present few problems to the manufacturers of packaging materials and to the manufacturers who are using them.

those intended to convey an impression of richness; for those intended to exemplify true harmony. This type of package is more truly artistic than the contrasting package, but the designer who employes analogy must have both color and design sense or else his work may lack distinction. The package embodying contrasting colors has more attention value than the other, but because such packages lack harmony people grow tired of them. The problem of suiting the color scheme to the length of time a package will be in use has received too little study. In this respect it matters little about such packages as toilet soap, because the wrapper is removed and destroyed at once; but the problem is quite different in designing a toilet cream jar or face powder box which must be handled frequently for long periods of time.

Like color itself design has its practical aspects. Arrangement of the design of a label intended for automatic application may be such that if the label is not registered exactly in the center the package will look lopsided. As it is impossible to secure absolute registry owing to variations in glass, the importance of arranging a design so that minute variations of center will not be obvious can at once be seen.

From a printing standpoint, the nature of the design and the color of the inks in relation to the quality of paper stock has an important bearing on the appearance of the finished job. Extremely fine and shaded lines do not always reproduce well in light colors on cheap stock. Very often a design is made and even varnished on a coated stock and the printer is asked to do the impossible in reproducing this

A*lje Laboratories*, New York, is marketing a new waveset packaged as shown. The bottle is four-sided and tapers towards the bottom, fitting snugly into the carton shown, thus dispensing with a label. There is, however, a label on the top of the cap. Another feature of the bottle is its wide mouth designed to permit a comb to be dipped into the liquid. The package retails for ten cents.

Pinaud's smart new triple vanity is a new type of sifter compact utilizing a shutter principle, while the Reich-Ash model makes the loose powder available with a spring-up instead of a pry-open top.

Northam Warren Corp., New York, has just added this "Cutex Hand Cream" to its line to retail at 50 cents. The package itself is a most attractive one, the jar being of an ivory finish and unusual shape, exclusive to this company in the cosmetic field. The label also adds a distinctive note.

A somewhat different approach to packaging is displayed in the "Nu-Ha-Lor," designed and manufactured by Scovill Manufacturing Co., Waterbury, Conn. It may be carried like a fountain pen and affords a convenient method of using inhalants or sprays for the relief of colds, asthma, sinus trouble, hay fever, etc. To fill, the cap is removed, and the vial unscrewed and filled to the desired level marked "Inhalant Level" and "Spray Level," and then screwed back tightly. To use, the nasal guard is unscrewed about one turn and inserted in one nostril, while the other is held closed with the finger. The feature of the "Nu-Ha-Lor" is the fact that when the breath is drawn through the nostril, the vapor, if an inhalant is used, or the liquid, if the vial is filled to spray level, will pass through the nasal passages in a natural way without mechanical forcing. It retails at one dollar.

Gane's Chemical Works, Inc., New York, pharmaceuticals, has added a new product to its line, "Guphen," a brand of phenylcinchoninic acid guaiacol ester, for the treatment of bronchitis and upper respiratory affections. "Guphen" is put up in tablet form and packaged in a small sliding box, with a label running around the box, over the ends, which must be broken to get at the contents.

design on porous stock without loss of tonal values. The design, the colors, the quality of stock and the screen size must all be correlated.

Embossing employed in a label design intended for machine handling is another of the elements which must be carefully studied in regard to depth and arrangement on the label or trouble will surely result. Very often, too, design can be employed to conceal the slight marring which may occur in production owing to high speed mechanical handling.

From the merchandizing angle design itself can be employed to enhance pulling power by creating optical illusions of larger dimensions than the package actually possesses; it can be employed likewise to increase attention value by emphasizing the lettering or the message on the package.

Good Lettering Important

Although lettering is an integral part of design it is sufficiently important to regard as a fundamental. In perfect fairness it can be said that many otherwise competent artists cannot letter. That is to say, their lettering has no design sense of its own and the work they create either follows established models or what is worse the lettering appears to have been added to the package as an afterthought. Lettering to be effective must form an integral part of the composition. If the lettering *cannot* be left off the package without evident loss then the lettering is good. In all cases it should carry out the spirit of the package or its contents. Despite all that has been said about color suggesting the product there can be no doubt that the name of the product itself does most of the suggesting. A color may attract in general, but the lettering must attract in particular. One must facilitate and complement the other.

In addition to forming an integral part of design, lettering must be clear and readable from a distance of several feet. The artist should be guided by the fact that few people have really good eyesight and that retail stores are not always well lighted. Some of the so-called modernistic lettering, while it is fine and delicate and highly decorative, is utterly unsuited for packaging. Lettering which overlaps and interlocks, while decorative also, should not be used for a name as it is not legible enough. Each letter should stand out distinctly whether they are joined together or not. But there is a felicitous meaning here also, in that letters that are too widely separated fail to perform their function of instantaneous identification—especially on round packages where some of the letters may not be visible at all. Breaking up lettering horizontally or vertically destroys legibility almost invariably. This fault has been committed on some recent packages, and while they are decorative they must be studied at close range to identify them.

The next fundamental is typography. Although rarely hand lettered and invariably printed from some established type, it, nevertheless, has a decorative function which should not be overlooked. Selection of type and arrangement of copy both play an important part in package design. Like lettering, a good deal of package typography has the appearance of being superimposed at random on an otherwise good design, instead of forming an essential part of that design. One reason is that many artists merely indicate the position of typographical matter by brush strokes and fail to indicate what particular style of type will carry out the spirit of the design. It is very easy to overbalance a perfect design by selecting wrong type.

In addition to its decorative function, typography serves (with lettering) to identify the product; its various uses; its maker, trade-mark etc. Therefore the designer must keep in mind certain practical considerations in selecting a type which will complement his design. First, type must be easy to read; this is particularly true of type employed in the directions. When a user must follow directions for the use of a product with which he is not familiar, the wording should be simple and the typography arranged so that it may be persued without difficulty. There is a happy medium between type which is too large and too small; too fine and too bold.

Considering Form

The next element of design is form. Within limitations imposed by its nature, the container should have fine lines. Because of adaptability glass is superior to other forms of container materials in that it offers an almost unlimited number of possibilities for changing the lines of the container to suit a projected design, whereas with other materials it is usually necessary to modify a projected design to the relatively few number of practicable shapes available.

Consumers' Viewpoint

This problem may be solved when approached from the point of view of the consumer. The container should be easy to handle, easy to open, easy to reseal; it should have a firm base and its center of gravity should be near the bottom, so that it will stand up well on tables and in the medicine chest. If the container is a bottle it should have a pouring lip suited to the viscosity of the liquid it contains. Some bottles are so faulty in this respect that an attempt to pour just a little out of them will invariably result in drippage. The length of the neck in relation to the width of the shoulder has considerable influence on ease of pouring and these proportions should be carefully studied before designing the bottle. The importance of being able to pour easily from a bottle—especially one fitted with a screw cap—is emphasized when one considers the fact that the threads become messed up with the product (the more viscous ones especially) and this drippage in time reacts with the cap, which is not at this point insulated from the product with a liner. The result is that metal caps rust or tarnish, many of the plastics discolor. Gradually this drippage dries as the container is used, and a thick unsightly crust eventually forms, some of which is apt to get

into the product during successive removals of the cap. Often this crust glues the cap on so that it cannot be removed at all.

Size of Orifice

The shape of the container and the dimensions of its orifice should be adapted to the viscosity of the product. A well-known Philadelphia firm experienced difficulty with a hand lotion owing to failure to consider the diameter of the orifice in relation to the viscosity of the lotion. A standard round was adopted with a screw cap. Although the lotion filled easily enough because filled warm, it was impossible after it had cooled to pour out of the container without shaking. An interesting example of this same condition is illustrated by the fact that one of the standard screw-cap-rounds of one ounce capacity has an opening of only one-eighth inch. When this container is filled with water it will not pour out; it must be shaken. What would happen with substances more viscous than water? Cream jars with shoulders, although impractical because of the difficulty of removing the cream with the fingers, keep cropping up in the form of the so-called "modernistic" designs. But the question of the shape of the container in relation to the viscosity of the product has another practical aspect and this lies in the danger of forming air pockets during the filling process, especially when the product is filled cold as is the case with vanishing cream and a good many cosmetic pastes.

Retailers' Interest

The distributor also has an interest in the shape of the package which should be considered. Certain products require stacking and the shape of the package ought to permit this. He, too, will be interested in the strength of the package and its ability to stand up without tumbling every time it is accidentally touched. But a prime consideration from a retailer's standpoint is that the package ought not to be a dust collector. Many urban stores are dusty, in view of which the container should have as few embellishments as possible. One would think that the age of ornate embellishment were over, but a glance at some designs ultra modernistic in tone is apt to result in a conviction that the age of embellishment is only just starting. A recent "suggested" design for a mineral oil bottle had a series of ledges, which, though intended "to catch the drops of mineral oil which might be spilled," serve an unintended purpose in that they would be ideal dust collectors. Fortunately for somebody this particular design never got beyond the "suggested" stage.

Factory Considerations

But more than all other interests that of the factory is paramount. There are any number of shape considerations that affect machine production and when package designs fail they usually fail because they were poorly adapted for machine handling. It is true of course that odd designs can sometimes be handled by special machinery, and to the extremely large manufacturer the necessity for scrapping equipment and the construction of special equipment does not present an insurmountable obstacle. But the extremely large firms in the drug and cosmetic industry which could afford to scrap equipment just for the sake of a new package might be counted on one hand. Most of the units in this industry are small and cannot afford to scrap equipment wholesale. Most of the units indeed are so small that to scrap any equipment at all would be ruinous.

Hence, the package designer must take into consideration all the factors that make for success in handling a package on existing standard machinery. Peculiar shapes present problems of filling, capping, labeling, cartoning and wrapping. It is unnecessary to enumerate these details here as they have already been adequately treated in previous issues. The ideal shapes from a production standpoint are perfectly cylindrical, square and oblong packages.

Label Copy

Certain general considerations affect the package even though they have no bearing on design itself. The most important of these is printed matter. The important divisions of copy are: (excluding name and description of product, manufacturers name, address and trade-mark which usually are hand lettered), directions, formulae (if required by law), place of origin, advertising matter. Much has been written on the subject generally but relatively little on the writing of directions specifically. An examination of many products convinces the writer that few advertising people take sufficient care in writing directions. Many direction labels are written on the apparent assumption that the woman already knows something about the product, whereas directions should assume the reverse. When the direction is involved and consists of several steps like a recipe for instance, each of the successive steps should be succinctly described in a separate paragraph or else in numbered sentences, so that the user does not have to memorize the entire direction. All matter that is not relevant to the use of the product should not be interspersed through the directions as this confuses the user who is not familiar with its use. Advertising matter should be kept separate and if a great deal is necessary, it should be presented in a booklet attached to the container. It is unwise to attempt to put so much on a direction label that the type size must be reduced to a point where perusal is difficult. The purpose of a direction label is to direct; not to advertise.

In brief, package design is an architectural concept; it has a definite artistic phase and an equally definite practical phase. The ideal package is a composite of the right color, fine lines, sound design, fine lettering, economical and practical construction.

Cholesterin

As important in life processes as vitamins and hormones, the lipoids, of which cholesterin is now the most prominent, promise immediate interesting development not only in drug products, but also in cosmetics.

INVESTIGATION and research on the lipoids, which form the third of three groups of substances indispensable in controlling the functions of the human system, (the others being hormones and vitamins) has not been extensive as compared with the other two. At first investigators were concerned with a sub-group of the lipoids, the lecithins which have been studied quite thoroughly. The lecithins have been recommended as additions to all sorts of nourishing media and the results have been more or less effective. These investigations were not extended further into the lipoids on account of the great interest shown in hormones and vitamins.

It has been shown recently that there is a close connection between investigations on vitamins and hormones and the study of lipoids. For it has been proven that all processes of internal secretion involve the action of lipoids. It has, furthermore, been demonstrated, that just that sub-group of the lipoids —least up to the present time,—the stearines possesses the greatest importance in regulation of the functions of the human system through the endocrine glands. This group is chemically characterized as a coherent series of substances of similar and particularly involved structure with several systems of chains. While a large number of different sterines have been found in the vegetable kingdom, the number of which is constantly increasing, there are only two in the animal kingdom. One is ergosterin, whose connection with the antirachitic vitamin is commonly known. The second is cholesterin, which is found in small amounts only as a stable animal sterine along with ergosterin.

After considerable study it was concluded that the animal system obtains its cholesterin by the decomposition of vegetable sterines from nutrition, probably by metathesis of fatty acids. There was accordingly the greatest probability that cholesterin is important in vital processes, and this has been substantiated by more recent investigations.

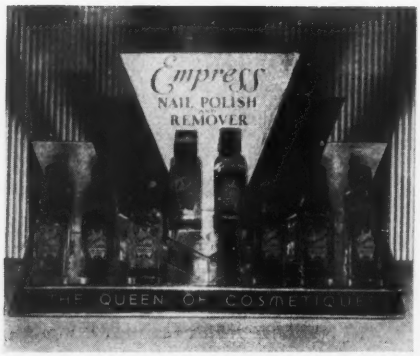
In all investigations up to the present, an intimate relation between the activity of the entire endocrine apparatus and the behaviour of cholesterin has been found, and one of the most important glands with internal secretion, the suprarenal gland, is to be designated as the organ which itself regulates the entire metabolism of cholesterin. Inasmuch as we must consider the skin as an essential part of the apparatus of internal secretion, hence the connection between the function of the skin and cholesterin, which has been known for a long time past, assumes a new importance.

Cholesterin forms an important constituent of sebaceous matter; it is made technically from wool grease. On the other hand, it has been known for a long time, that cholesterin is largely responsible for the relation between the specific functions of the skin, starting with the growth of the hair and including the disturbances of the skin functions, the formation of pimples, the sexual functions, particularly puberity, and the functions of the other endocrine organs. In both cases, that is in the functioning of the skin as well as in that of the sexual glands, all normal or pathological processes are accompanied by changes in the metabolism of cholesterin. What these are, is still too difficult to describe. Particularly with respect to the growth of the hair have there been many recent investigations. One of these studies showed that there was a close relation between the normal functioning of the hair-growing organs and the metabolism of cholesterin. It has also been possible to establish by experiment, that in the case of certain cases of falling-out of hair, especially where this is connected with the formation of dandruff, an external treatment of the scalp with solutions of cholesterin was able to help materially.

We are really just at the outset of investigation on the vital importance of cholesterin in life processes. However we are concerned here essentially with the explanation of the relation between the endocrine functions and body processes. Cholesterin plays an important role partly in the free state, and partly in combinations with the ordinary fatty acids, such as stearic acid and oleic acid. It is just this change of state between free and combined cholesterin that appears to be of the greatest importance. A further decomposition of cholesterin does not take place contrary to earlier opinion. It is consequently not a true nutrient like a fat, but a pure regulatory substance which makes its action felt through its presence only, probably principally by influencing the physical-chemical system of the cell.

Courtesy General Plastics

Some new lines of bottles recently introduced by Owens-Illinois Glass Co. At left is the emerald dropper outfit incorporating several new features. In center are three of the emerald tablet and capsule vials. At right are shown the Imperial Oblongs. All these lines have moulded closures.



Courtesy General Plastics

An attractive display used by the Empress Manufacturing Co. to get counter space for their nail polish remover. The bottles fit into square indentations in the platform of the display, the black and silver labels matching the black and silver of the display itself.

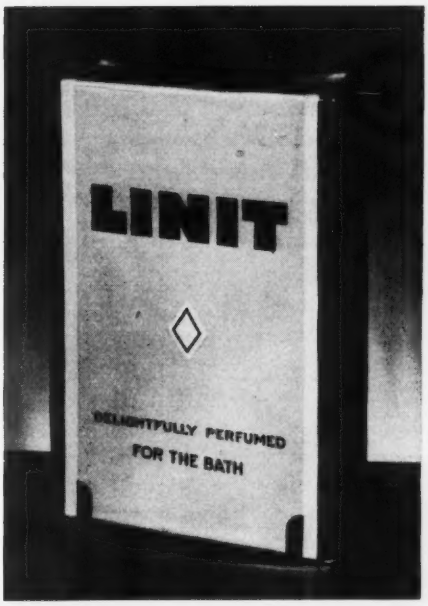
Courtesy Bakelite Corp.

Pennsylvania Glass Products Co. has recently introduced the above dropper bottle outfit, which has a moulded closure and a dropper or applicator rod.

Courtesy Emson-Freeman Co.

The feature of this Norwich Aspirin counter display is that when the cover is opened, the easel for the upper tier is automatically projected into position. When the top is lifted back, it snaps firmly into position. The display carton affords the dealer an opportunity to display 36 tins.

Wolf Package Award



Over 400 packages were entered in the contest for the Irwin D. Wolf award for "the best package developed and put on the market", offered by the American Management Association, in connection with the Second Packaging Exposition held at Chicago, March 7-12. The package containing "Linit," a preparation for the bath, manufactured by the Corn Products Refining Co., New York, was judged the best from the standpoint of appearance, utility and salability. The color scheme is a background of green with a black and yellow edge. The diamond design in the center is yellow and black.

Eleven honorary awards in the form of certificates were also presented for the packages judged the best in their group or class. The "Gemey Brilliantine" bottle, entered by Richard Hudnut, Inc., New York, and designed by C. Leonard Pfeiffer, won the honorable mention for the glass container group. The "Couettes" package of Johnson & Johnson, New Brunswick, N. J., won honorable mention for open display folding boxes.

Also illustrated here is a representative group of the drug and cosmetic packages entered in the exhibit which was held at the Art Center, New York. The jury of award consisted of Alon Bement, Director of the Art Center; Richard F. Bach, Director of Industrial Relations, the Metropolitan Museum of Art; Dr. Paul H. Nystrom, Professor of Marketing, Columbia University; Professor Charles R. Richards, Executive Vice-President, Museum of Science and Industry of New York; Dr. John A. Stevenson, Vice-President, Penn. Mutual Life Insurance Company.

Ambrosia's Plan

At the climax of a three carefully planned merchandising plan, Ambrosia increases sales by a remarkable percentage. Manufacturers of cosmetics can learn from the patience displayed by this manufacturer.

FREE
WITH $1.00 SIZE AMBRŌSIA
AMBRŌSIA FLASK . . . . (value 50¢) FREE
J & J COUETTES . . . . . (value 25¢) FREE
AMBRŌSIA FUNNEL . . . (value 25¢) FREE
$2.00 VALUE FOR $1.00
To Demonstrate
THE 1-MINUTE FACIAL

MERCHANDISING of cosmetics is often an affair not definitely planned in the effect of the various steps upon the public. Quite often the idea behind the merchandising scheme is to throw at the public the greatest amount of claims that can be made within a short space of time. The fact that some manufacturers do continue to state new claims progressively is most often due to these claims not being known before they were made. That a more orderly program in a merchandising plan will bring greater results has been proven quite conclusively by the success of Hinze Ambrosia.

However, the results are proving the soundness of the investment. Shown to the trade in the middle of January, this new idea has increased orders 187 per cent. above the corresponding volume in 1931. This, in spite of the fact that the 1931 sales program, also based on a powerful offer, produced record-breaking volume. Douglas Haggerty, general sales manager of Ambrosia hopes to sell 1,500,000 units on this deal. On last year's deal, Mr. Haggerty sold 525,000 units. He states that he could have sold 600,000 units if he had the goods. In the forepart of this month Mr. Haggerty has orders for 750,000 units of the new offer and the deal does not start until April 1, terminating May 1.

Another method of driving home the reception being accorded the present offer by the trade is to state that the number of combination offers sold this year in six weeks is 46 per cent. greater than the number of special-offer packages sold last year in four months.

The present offer is extremely attractive to retailer, netting him 40 per cent. if sold at list. The deal to the retailer consists of 10 of the ensemble packages, the retailer paying for nine and receiving one free. The deal costs the retailer six dollars, and he gets back ten dollars.

The successful promotion of Hinze Ambrosia seems to be due to a combination of things. In the first place Ambrosia was distinctly different from any other cosmetic on the market. In the second place it has been promoted by a varying and most interesting series of combination offers which immediately induce customers to try the product since they are obviously getting a lot for their money. In the third place the dealer's profits margin has always been wide on these offers and he is not asked to sacrifice his profits to the promotion of Ambrosia.

As a climax of a three year program in the marketing of a new product, Hinze Ambrosia, Inc., is offering its product in a combination offer which gives the necessary things for a one minute facial. That is, the requisites for this type of facial are only Ambrosia and cotton pads, but Ambrosia builds up its present offer by including in addition to a regular dollar bottle of Ambrosia and a package of sixty J and J Couettes, a filled flask of Ambrosia for use in other places than the home, and also a small moulded plastic funnel for refilling the flask. Thus Ambrosia offers for the price of the bottle of Ambrosia alone, twice the value of merchandise. This is being done as a means of finally introducing Ambrosia in its true function.

It is stated that this latest plan was recognized as long ago as March, 1929. The idea was tested by surveys and campaigns and then filed away, not to

(Continued on page 295)

Making Creams

Creams are among the most widely made and used cosmetics. This article is very comprehensive, but surprisingly brief.

VANISHING creams in one form or another seem to be regaining popularity. At one time in the history of the trade, some twenty odd years ago when vanishing creams first made their appearance, they were extremely popular. Then for a time they waned in favor as the impression gained currency that they exercised a harsh, drying influence on the skin. Some three years ago they began to make a comeback, and now as "foundation creams," "powder base creams" and especially as "hand creams" they are regaining a leading place among toilet preparations.

One of the most interesting things in connection with the history of these creams is that at least one company, Mystic Cream Co. of Middletown, N. Y., has made a specialty of vanishing cream ever since it first appeared on the market. In order to increase business by developing a new use for vanishing cream, the company some time ago began to stress in its advertising the usefulness and economy of vanishing cream for the hands, an appeal to which the market responded instantly.

The vanishing cream of today is, however, a better product than the early ones, which were harsh soaps. Many of the modern creams are still soaps of course, but a number of them, especially some of those made with absorption bases, are not soaps at all. In the early days the stearic acid was saponified without the addition of ingredients to minimize the drying effect of the soap. In most of the modern creams other ingredients are added, and the hand creams especially contain as a general rule an unusually large percentage of glycerine.

Vanishing creams are much more difficult to make than ordinary toilet creams. The procedure is very exacting from start to finish. Different cream makers given the same formula will often produce different results. For this reason we emphasize the fact that the following typical formulas are given only to indicate the customary proportions of the various ingredients and to illustrate the general manufacturing procedure.

No. 1

Stearic Acid	100 lbs.
Sodium Carbonate	2 lbs.
Potassium Hydroxide	2 lbs.
Glycerine	30 lbs.
Water	400 lbs.
Alcohol	20 lbs.
Perfume	6 lbs.
Total	560 lbs.

Procedure: Melt and strain the stearic acid. Melt the sodium carbonate and the potassium hydroxide in water, add the glycerine, heat the solution to about 80° C., and add to the melted stearic while the mixer is operating at full speed. Continue the mixing until it is evident by the thickening of the mixture that it has become saponified. Mix the perfume in the alcohol and add to the cream after it has cooled sufficiently and mix at slow speed until incorporated.

Creams of this general type are soft and bland. Decrease the water content and increase the glycerine and it will make a fairly good hand cream.

No. 2

Stearic Acid	20 lbs.
Potassium Hydroxide	¾ lbs.
Sodium Hydroxide	3 ozs
Water	75 lbs.
Perfume	8 ozs.
Approximately	95 lbs.

Melt the stearic as usual. Dissolve the alkalis in 25 lbs. of water. Heat the remainder of the water, add it to alkali solution, and then add the hot solution to the melted stearic acid while the mixer is operating rapidly. When saponification has taken place and the cream cooled sufficiently, stir in the perfume at slow speed. This cream is of the traditional type and is considered harsh on the skin.

No. 3

Absorption Base Type

Vanishing cream base without perfume (Made with either of the foregoing formulas)	60 lbs.
Asobrption base (Of the types usually advertised in The Drug And Cosmetic Industry)	10 lbs.
Water	40 lbs.
Perfume	¾ lbs.
	110 lbs.

Stir the absorption base into the vanishing cream; then heat the water and stir it in gradually until a smooth cream results. Then stir in the perfume.

(*Continued on page 280*)

Perfuming Creams

Perfuming of creams varies with the type of cream made since different raw materials affect perfumes in different ways. In this article methods of perfuming all types of creams are described.

MANY cosmetic manufacturers find it difficult to perfume their creams in a satisfactory manner. When selecting a perfume for cream, one must bear in mind the following points:

1. Creams are used as a foundation on which other types of cosmetics are employed, such as lotions, powders, rouges, etc. For this reason, they should not be too heavily scented in order to avoid conflicting with the powder perfume which, in a perfect make up, should be the same as the perfume used. Odors of the so-called neutral, floral type such as rose, lilac, lily of the valley, jasmin, orange blossom are to be preferred to the heavy bouquets.

2. The selection of a perfume should be made according to the type and process of the cream manufactured. This is of utmost importance, as we shall see later on.

3. Use of irritating essential oils or aromatic chemicals should be carefully avoided, or restricted to a minimum.

4. The different ingredients used in perfumes for creams must be carefully selected in order to avoid aromatic chemicals or essential oils which may discolor or react on certain elements of the creams, resulting in breaking down, or development of disagreeable odors after the creams have been put in jars.

Skin Irritation

Tests carried out have disclosed that many essential oils and aromatic chemicals are irritating to the skin. The degree of causticity corresponds fairly well to the following classifications:

1. Aldehydes. Aldehydes belonging to the aromatic series are more caustic than those belonging to the fatty series.

2. Certain Ketones such as benzylidenacetone and esters such as diethylphthalate are very caustic especially when they are not absolutely pure.

3. Phenols such as eugenol, thymol.

4. Coumarine, heliotropine, artificial musks.

5. Terpenes.

6. Alcohols and their esters, ketones of the ionone group, orris.

The degree of causticity varies also with the molecular weight in each series, the product having the highest molecular weight is the least caustic, though it is not an absolute rule. The use of the most caustic of these products, particularly the aldehydes, should be avoided in creams or if absolutely necessary to obtain certain floral effects, they should be reduced to a minimum. Their action can also sometimes be nullified by products having a soothing effect on the skin. Among these we can mention phenylethyl alcohol, which is the main constituent of rose and orange blossom water. Rose water has always been recommended in European and particularly French Pharmacopoeia as a soothing wash for eyes and face. This is probably the reason why all the French creams or face lotion formulae contain rose or orange flower water as one of the main ingredients. The degree of causticity of essential oil can be determined by the proportion and degree of causticity of their main constituent.

Cleansing Creams

Cleansing creams are generally made of petrolatum jellies of different consistencies according to mineral oil percentage. Some are also made in a similar manner to cold creams. In perfuming petrolatum jellies, the problem is simple for nearly any type of bouquet odor will do as petrolatum jelly is a neutral medium and no secondary chemical reactions can take place between the perfume and the cream ingredients. As petrolatum jellies are absolutely odorless, even the most delicate perfumes will not be effected. Lemon, which has proved one of the most popular odors for cleansing cream, has not always been a very proper selection, as oil of lemon, terpeneless or not, does not hold in any type of cream very well; it oxidizes easily and after standing in jars in the dressing room, takes on a very bad odor due to oxidation. Bitter almond also presents the same disturbance, as oxidation of benzaldehyde leads to benzoic acid. Moreover, benzaldehyde, because it is an aldehyde, is very irritating to the skin, but on account of its cheapness and great odor strength, is still widely used.

Triethylanolamime Creams

These creams also belong to the group of cleansing creams and have been made popular because they can easily be washed off with water. They are difficult to perfume because triethylanolamine, which is generally in excess in these creams, reacts on a great number of aromatic chemicals and constituents of essential oils producing secondary reactions which change the nature of the perfume and also may bring

(*Continued on page 282*)

OLEORESIN CAPSICUM

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ALCOHOLIC
SPECIAL PROCESS

We are now in a position to supply these new and improved types of Oleoresin Capsicum, either for prompt shipment or in contract lots, from New York stock.

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UNGERER & CO.

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NEW YORK

The Quartz Lamp* and Essential Oils

By E. Ekman and A. Samyschlayewa

The quartz lamp is becoming of increasing importance in determining the purity of essential oils. This article gives the results that should be anticipated with a great many oils.

THE object of the investigation was to devise with the aid of the quartz lamp a method for analyzing or examining essential oils, this method being as rapid and as simple as possible. The idea was to determine the purity of the oils. Practical results were striven for. It was found that the quartz tubes, which are used in working with ultra violet rays, are too expensive and hence the analyses themselves become too expensive. Furthermore, one and the same tube cannot be used for additional experiments without it first being carefully cleaned. The cleaning process is long drawn out and this prolongs the analysis. The conclusion was therefore reached to use ordinary glass tubes for holding the samples of essential oils that are being investigated, instead of using quartz glass tubes for this purpose. The results were entirely satisfactory, and inasmuch as these tubes are very cheap, they may be discarded after each test, rather than being used over again.

The individual samples of essential oils were obtained personally by the investigators and care was taken to see that every sample was removed from a newly opened bottle. The physical constants of each sample of the essential oils were determined immediately after removal from the original bottles. Then they were subjected to the action of the ultra violet rays.

When the information was studied, the following was obtained:

1. The cypress oil fluoresces with a violet shimmer with a whitish effect. But when the oil has been fresh distilled, the fluorescence does not have the whitish effects or the violet shimmer. Hence, it follows that the fluorescence test can be used to determine whether or not the oil is fresh or has become resinified.

2. Cedar oil and juniper oil. It can be assumed, that the whitish fluorescence in these oils is dependent on the resin.

3. Palm rosa oil fluoresces with a bluish color and with some whitish effects. Fresh distilled oil has a weak, dull, violet fluorescence. The residue after distillation, however, fluoresces with a brilliant bluish color. It may be assumed, that the color of the undistilled oil is dependent on the fluorescence of the resins which are present in the oil.

4. In order to obtain the yellowish fluorescence of lemongrass oil, the oil is rectified. Freshly rectified pil does not however fluoresce. But the residue, after rectification, gave a yellowish fluorescence. Hence the fluorescence of lemongrass oil is not caused by the oil itself, but by the resins which are present in it.

5. The same results are obtained with verbena oil.

6. Calamus oil. After rectification, the weak violet fluorescence remains. But the bluish zone and whitish effects disappear. Hence, the weak violet color of the fluorescence belongs to the oil, but the bluish zone and the whitish effects are explained by the presence of resins in the oil.

7. Hyacinth flower oil fluoresces with a pinkish-violet color, but it shows a dazzling luminous violet fluorescence, which is characteristic of methyl anthranilate. Although it is stated in the literature (Gildemeister and Hoffmann, volume II, page 410), that the presence of methyl anthranilate in hyacinth flower oil cannot be established, nevertheless the fluorescence test clearly demonstrates the existence of this ester in the oil.

8. Tuberose oil fluoresces with a dazzling violet color. The fluorescence is dependent on the ingredients, methyl anthranilate and benzyl benzoate. A large or small content of these constituents in the oil can be approximately established by the intensity of the fluorescence.

9. Iris oil, which was obtained from an unknown firm, fluoresces with a distinctly violet color. Iris Concrete of Chiris does not fluoresce. It can be established, that the iris oil of the unknown origin

*Riechstoffindustrie, 1931.

(*Continued on page 278*)

Sharpen your pencil but stick to your standards

How often we all hear today: "There's an order to be had, but you'll have to sharpen your pencil."

The temptation to shade the price at the expense of the product is always present.

It's easy to get business that way, but hard to hold it. Someone else generally offers something even cheaper, and gets the next order.

The preparation whose sale is based on a *known standard of excellence* is in a far more comfortable position today, than the one dependent on price alone.

Stick to your standards. Poor ingredients seldom make good products. We have found that if we put the quality *in*, it usually shows up, and builds steady business not only for us, but also (and this is more important) for our customers.

If you are interested in that kind of aromatic essentials, we are interested in hearing from you.

van Ameringen-Haebler, Inc.

Manufacturers and Importers of

Aromatic Essentials

Flavor Materials, Aromatic Chemicals
Essential Oils, Perfume Specialties

315 FOURTH AVENUE, NEW YORK

180 North Wacker Drive, Chicago — 619 Clark Avenue, St. Louis — 42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

NEW HINDS PACKAGES

THE A. S. Hinds Co., Lehn & Fink subsidiary, maker of "Hinds Honey and Almond Cream," has made several package changes involving the three associated products, "Hinds Cleansing Cream," "Hinds Toning Cleanser," and "Hinds Texture Cream." All three are fairly recent additions to the line and only went on a national merchandising and advertising basis in February.

As part of the merchandising program on these products, the company is just introducing them in ten-cent packages, the two creams in tubes and the liquid in a small bottle as shown. The small sizes carry out the maroon and silver idea and are designed not only to supply the ten-cent market but introduce the use of the regular size packages.

The new ten cent sizes

The regular sizes showing the new Outsert

To supplement further the promotion of sales of these three products, the company has made a slight packaging change on the large jars of both creams. An outsert has replaced the former maroon and silver label on the back. When opened, the outsert not only gives directions for the use of that particular product, but also gives a short sales story on the other two members of the group and offers to send trial sizes. A coupon is also printed on the outsert to be torn off, filled out and mailed to the company if trial sizes of the other two products are desired.

New Medicinals

Helpin, which is found in the German pharmacopoeia, is a sterile lecithin glycerin emulsion which is used to increase the resistance of the human system in various states and conditions of exhaustion. It has been reported that highly favorable results have been obtained with the use of this drug when administered to patients suffering from tuberculosis of the lungs and of the eye. This preparation is manufactured by Chemische Fabrik Gruenau.

Renotrat is the name given to a preparation which is obtained from sarsaparilla. It is used for decreasing the residual nitrogen content of the blood in diseases of the kidneys. It is manufactured by Nordmarkwerke, Hamburg, Germany.

Taumasthman is a remedy used in the treatment of asthma. It consists of theophyllin, caffein, agricin, pyramidon substitute, ephedrin and texract of belladonna. It is used alone or in combination with Taumagenkur. It is manufactured by the Physiologisch-chemisches Laboratorium H. Rosenberg, Freiburg in Br., Germany.

Heilsen is a preparation which the I. G. Farbenindustrie A. G. has brought out on the market as an extract of the pollen that causes hay fever in the countries of Central Europe. (In America, where this type of specific therapy has been practised for a number of years past, different types of pollen play the important role). Special ampulles, containing extracts in various concentrations of fifteen different pollens in all, are available for testing and treatment.

A. C. S. Drug Papers

American Chemical Society has completed plans for its midwest regional meeting at the Hotel Coronado, St. Louis, May 5-7. Group meetings will be held all day May 6 and the pharmaceutical group program is as follows: "Survey of Recent Work on Antipyretics," Dr. R. L. Shriner; "Resume of Recent Work on Antiseptics and Disinfectants," Dr. Geo. F. Reddish; "Resume of Recent Work on Phytochemistry," Dr. Edw. Kremers; "Resume of Progress in the Field of Anthraquinone," Dr. John Gardner.

ANNOUNCEMENT

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A pioneers and leaders for over a century in the perfume materials industry, we take pleasure in announcing the opening of a Research Department in New York which will devote itself to the study of the latest scientific developments in toilet preparations, and will advise on the technical problems connected with the cosmetic industry.

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Synthetic Flower Oils

for

CREAMS
POWDERS
and other
COSMETICS

JUSTIN DUPONT AROMATICS represent Synthetic Flower Oils blended with natural floral products, and are distinguished by their delightful and lasting fragrance. They can be used where the selling price of the creams and powders will not permit the use of the more costly natural floral oils.

JUSTIN DUPONT AROMATIC SPECIALTIES represent the modern type of the combination of natural flower oils and aromatic chemicals of our own manufacture. Especially adapted for new creations or for introducing a new note into an established formula; recommended to the perfumer on account of their great strength, economy and wide usefulness.

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for

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The Compounders' Corner

Raw Materials

To begin with, we have a study of the different fatty raw materials in use, namely: vegetable, animal or mineral in origin. Fats, properly speaking, are glycerides or glycerin esters. Generally mixtures of oleins, palmitius and stearins. Their consistencies and melting points vary with their palmitin and stearin content. The use of olein with its tendency to become rancid is to be avoided.

Lard. Lard is pork fat. It must be specially prepared in order to avoid rancidity. As this fat is very soft it is ordinarily mixed with beef fat. A good consistency is obtained in the pomade made in Grasse for enfleurage which consists of 40 parts of beef fat and 60 parts of lard. The fat of recently killed animals is cut into pieces with all tissues and other impurities removed. To remove blood traces the mass is ground between mill stones with water and washed until the latter is clear. It is then melted in a steam jacketed pan at low temperature and ¾ oz. of alum is added per lb. of fat. The object of the alum is to facilitate the coagulation of impurities which are removed with the help of a skimming spoon. The mass is allowed to stand for several days, then the separated water is removed and the fat is strained through a linen filter. The fat is then mixed while still hot, with one dram of absolute benzoin dissolved in ¼ oz. of alcohol for two pounds of fat. The benzoin acts as an antiseptic to help the preservation and avoid rancidity. This preparation, called French pomade, keeps very well and can be used for the manufacture of lipsticks, rouge, creams, nourishing creams, etc.

Veal Fat. In replacing beef fat by veal fat in the above formula, a finer grade of pomade is obtained.

Horse Oil. This oil, prepared mostly in France, is obtained by the same treatment as lard, but is filtered at 150° C. Five to six ounces of a clear oil per lb. of fat is obtained. This oil keeps better than most vegetable oils, has an iodine index higher than olein and finds a use in the preparation of medicated oils for injections as it is very readily absorbed. It should prove very interesting for the manufacture of skin food.

Cocoa Butter

This product, obtained from cocoa beans is a mixture of stearin, palmitin, olein, arachin, etc. Melting point is between 30° and 32° C. It has a chocolate odor and is soluble in alcohol (1 to 20 parts absolute alcohol), ether and terpentine. Its property to remain solid at a temperature just below its fusing point and low melting point, make it useful for preparations which have to melt at body temperature such as suppositories. It also makes a good base for skin food and massage cream as it can be absorbed through the skin. One of the disadvantages of this product is that it is apt to become rancid, particularly in a preparation where water is used, but this can be corrected by the use of antiseptics such as benzoin, salicylic acid, boric acid, resorcin, etc.

Lanoline

Lanoline is the purified, anhydrous, fatty substance extracted from wool sheep. It is a complex substance of which the important, but not the main constituents, are cholesterol and iso-cholesterol and their esters about 15%. These two constituents are particularly important because they communicate to the lanoline the property to absorb several times its weight of water without the help of any emulsifying agent, for this reason, it is always specified in different Pharmacopoeias that it should be anhydrous and should not contain more than one-tenth of one per cent. of water. Lanoline presents itself with a slight fatty odor, is of firm consistency forming hard filaments like petroleum jelly when stretched. It is insoluble in water but can absorb twice its weight of this liquid without changing its consistency very much and without separation. It then becomes a lighter shade, almost a creamy white. It is soluble in ether, chloroform and all solvents dissolving fats, and slightly soluble in cold and more in hot alcohol. The Pharmacopoeia gives different laboratory tests to determine the purity of this product. They are:

Water content. "Dried to constant weight on a water bath with frequent stirring, lanoline loses not more than 0.5% of its weight."

Ash: not more than 0.1 per cent.

Free alkalies and fatty acids. Dissolve 2 Gm. of wool fat in 10 cc. of ether, and add 2 drops of phenolphthalein T.S.: the liquid is not colored red (free alkalies), but on the addition of 0.2 cc. of tenth-normal sodium hydroxide a deep red color is produced (free fatty acids).

Chlorine. Boil 1 Gm. of wool fat with 20 cc. of alcohol under a reflux condenser, cool, filter, and add to the filtrate 5 drops of an alcoholic solution of silver nitrate (1 in 50): the turbidity, if any, is not greater than that produced by the same quantity of the silver nitrate solution in a mixture of the same volume of alcohol and 0.5 cc. of fiftieth-normal hydrochloric acid (chloride).

Glycerin and soluble oxydizable impurities. Warm 10 Gm. of wool fat with 50 cc. of distilled water on a water bath, constantly stirring the mixture until the wool fat is melted: the fat separates completely on cooling, leaving the aqueous layer nearly clear and neutral to litmus paper. A 10 cc. portion of the filtered aqueous layer leaves no sweet residue on evaporation (glycerin). Another 10 cc. portion of the filtrate emits no ammonia vapors when boiled with 1 cc. of sodium hydroxide T. S. and a further 10 cc. portion does not completely decolorize 0.05 cc. of tenth normal potassium permanganate within ten minutes (soluble oxidizable impurities).

Petrolatum. About 0.5 Gm. of wool fat dissolves completely in 40 cc. of boiling dehydrated alcohol (petrolatum).

Iodine value. Not less than 18 and not more than 28, using 0.8 to 0.85 Gm. of wool fat."

Uses. Lanoline should be used wherever a water soluble product has to be incorporated in a preparation. This fat is easily absorbed through the skin and facilitates the absorption of medicines such as iodine, sulfur, quinine, etc. It is used for making creams, ointments, lip sticks, skin foods, etc.

Hydrous wool fat, the hydrated form of lanoline, has a usual percentage of water between 25 to 30%. It is used in pharmacy as a vehicle for ointments and in perfumery for the manufacture of nourishing creams as it is easily absorbed through the skin.

Titanium Oxide Powders

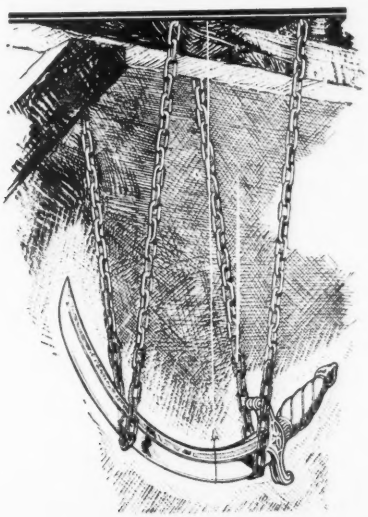
Various uses have been proposed for titanium dioxide in place of zinc oxide and similar substances. The fact that it can be used with good results and without any harm to the skin in the manufacture of baby powders is highly significant. Before it was concluded that this could be safely done, comparative experiments were carried out with titanium dioxide in comparison with zinc oxide, bismuth subnitrate, talc, kaolin, kieselguhr and lycopodium. The results showed that there could be no objection from the pharmacological standpoint against the use of titanium dioxide for this purpose. A properly prepared titanium dioxide adheres well to the skin and possesses high covering power.

Hormones in Cosmetics

Hormones have made their appearance in cosmetic compounding. Creams prepared with their aid nourish the skin. An easily adsorbable preparation is one made with a lecithin or cholesterin base. They also contain an albumen soap, which is a superfatted soap, which contains two per cent. of pure egg albumen in addition of colloidal sulphur. The preparation also contains the skin hormone and forms a superior, scientifically prepared product, an example of the best practice in compounding cosmetics.

(Continued on page 276)

Remove the Threat!

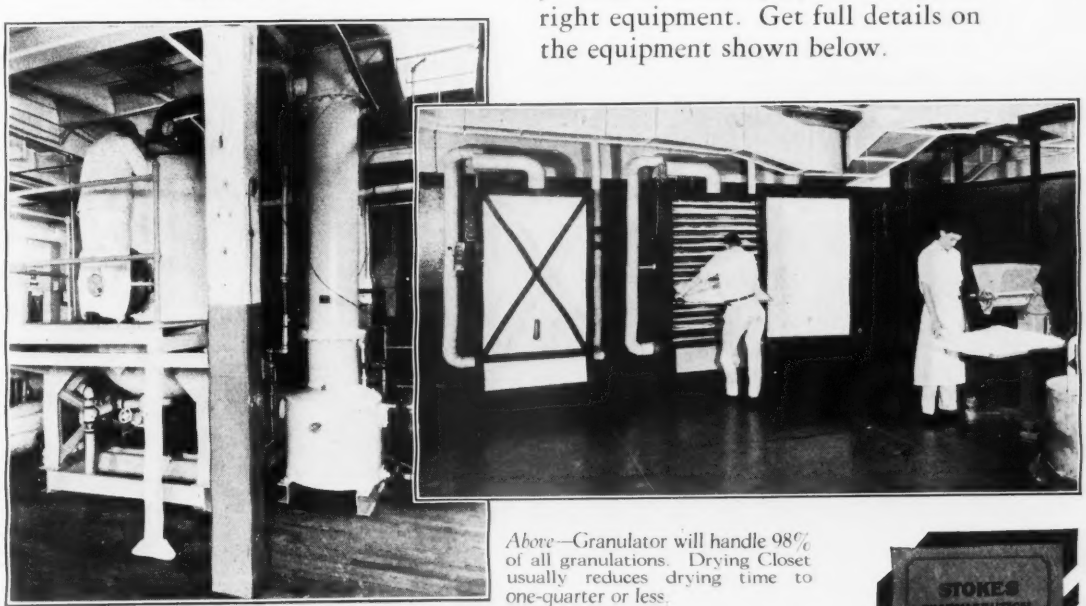


To remove the threat of a dangerously narrow profit margin—hanging like the Sword of Damocles over many a business today—use equipment that will lower your production costs by combining processes, salvaging wastes, and shortening operating time.

STOKES Equipment—specially designed to solve the users' problems—will help "remove the threat."

Also in your Granulating Department,

you can save money by installing the right equipment. Get full details on the equipment shown below.



Above—Granulator will handle 98% of all granulations. Drying Closet usually reduces drying time to one-quarter or less.

At Left—STOKES rugged and special-duty Vacuum Pan concentrating and drying a powdered extract from percolate,—at low temperature, in one piece of apparatus and without handling.

STOKES
Pharmaceutical Equipment

Tablet Making Machines	Coating and Polishing Pans
Vacuum Pans and Dryers	Water Stills
Molds of all Types	Drug Mills and Mixers
Powder Fillers	Alcohol Recovery Apparatus
Drying Closets	Tube and Jar Fillers
High Vacuum Pumps	Jacketed Kettles
Percolators	Bottle Washers
Capsule Fillers	Conveyors
Oscillating Granulators	Special Machinery

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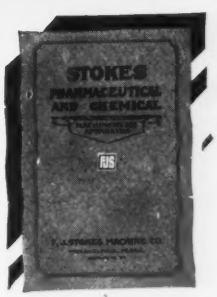

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Please send Catalog No. 29.

Name.....

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Address.....

For Plant Managers

By Francis Chilson
Consulting Production Engineer

Filtering Shampoo Soap

We have this very interesting letter from R. F. Merrill, plant superintendent of The Andrew Jergens Co., Ltd., Perth, Ontario: "Very many thanks for your letter. I am glad to find that my views are in accordance with yours when you say that face powder should not be mixed with water in matching shades.

"We have been experimenting further with the filtration of liquid soap. We are using a Karl Kiefer Single Plate No. 2 Filter with a filtering area of approximately four and a half square feet. We find that using a layer of Kiefer Filter Mass about one quarter of an inch on each plate is about the right thickness. We use three ounces of Johns-Manville Hyflo Super-cel as a pre-coating agent. To about 400 pounds of liquid soap, we add six ounces additional of Hyflo Super-cel and find that this gives us a very clear filtrate at 40° F.

"The capacity of this filter runs about eight to ten gallons per hour when using thirty pounds pressure which is developed by means of a Rotary Pump.

"We are at the present time experimenting with the use of asbestos mixed with the paper pulp and will be glad to let you know how this works."

This is our idea of a fine, interesting and helpful letter. If more of "youse boids" who read this department could be persuaded to take your feet down off your desks and write similar ones, this department would become one of the most potent influences in the drug and cosmetic industry for the exchange of progressive ideas. And besides we are always willing to allow other people to write the department for us. (Aside to Mr. Merrill: We'll all be glad to hear about your experiments. Let's hear from you soon again.)

More on Shampoo Soaps

The following letter from R. P. Cargille, 26 Cortlandt St., New York offers an interesting suggestion:

"We note with interest the reference on page 119 of the last issue of THE DRUG AND COSMETIC INDUSTRY to the matter of viscosity of shampoo and liquid soaps.

"We specialize in the production of viscosity tubes by the air-bubble method for the varnish industry and it is possible these tubes can be adapted to testing the products referred to in this article. We shall be glad to provide without charge a trial outfit of our tubes for testing these products." (Aside to Mr. Cargille: Why not send a set to Mr. Merrill a trial set of the tubes? He's in shampoo soap up to his neck and will be glad to experiment with them.)

Reels: Round' Hexagonal and Centrifugal

Mr. J. G. Ayars, president of Puritan Cosmetics, Incorporated, St. Louis, asked us to amplify our recent paper on sifting to include more details about reels and their possible application to the bolting of face powder.

The round reels were the earliest type of sifters used in the trade. They consist merely of a cylindrical frame-work over which bolting cloth is stretched. Sifting is effected by revolving the reel so that the batch slides on the inner surface of the cloth and eventually works through. They are very rarely used anymore owing to the development of more efficient types of sifters. Many plant men like the old reels, however, because one could be built right in the plant without any difficulty.

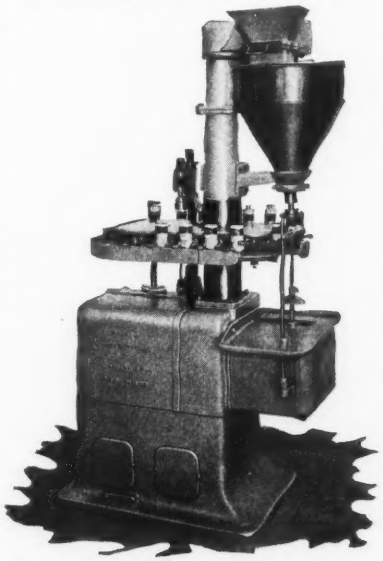
The hexagonal reel superseded the round reels because of their greater efficiency and their applicability to more difficult materials than the round reel would handle. The reel being hexagonal in shape carries the batch up farther and gives it a greater throw. This imparts a breaking action to the process which pulverizes soft lumps such as those made by zinc oxide. They are made with the bolting cloth stretched over the ribs, or with the bolting cloth fastened to panels which are bolted in place on the framework of the reel.

The centrifugal reel is the most recent development of this form of sifter. These usually consist of two cylinders, one within the other. The inner one is made up of cast iron spiders mounted on the drive shaft, and to these spiders wooden bars are bolted extending the full length of the reel. Both inner and outer cylinders revolve in the same direction—the outer one to which the bolting cloth is attached revolving slowly, while the inner one revolves at a speed of 180 rpm. In this way the rapidly revolving inner cylinder or framework plows through the batch and literally sprays the powder through the cloth on the outer cylinder throughout its entire circumference, so that the entire surface of the bolting cloth is working all the time. This type of machine will handle sluggish powder very well. If desired this type of reel can be purchased with an inner brush cylinder instead of the paddle type.

All reels are inevitably enclosed in a dustproof hood at the bottom of which is a spiral conveyor to carry the bolted powder to the discharge ports. Naturally, sifters of this type are best suited for large production as they will hold several hundred pounds of powder at a charge. As a customary thing reels have been pretty largely superseded by the gyratory, vibrating and centrifugal sifters, which take little floor space and effect a very rapid sifting.

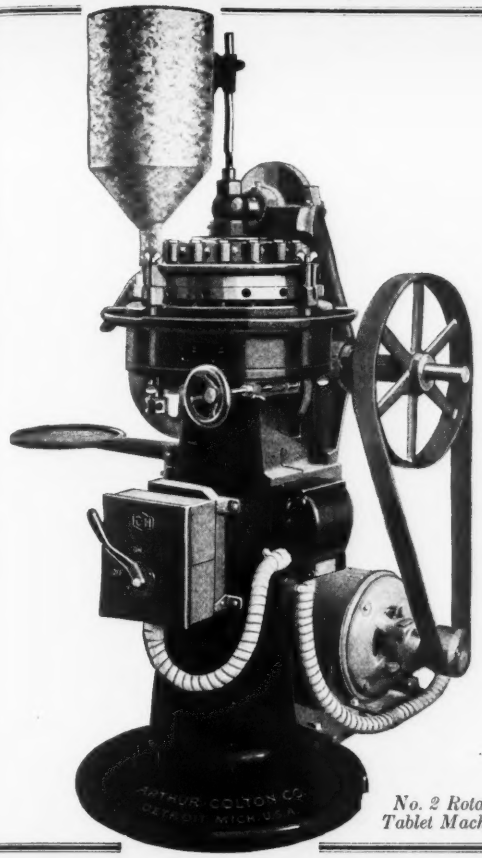
A Possibility In This?

A new filling machine for filling creams and other viscuous products was recently announced by a western company. Since we have not yet received literature on it we cannot give an adequate description.



But one of the interesting features said to be incorporated is a no jar no fill mechanism. Instead of a fixed, automatic filling action which operates whether the jar is in place or not, this machine is said to be operated by the jars themselves. The jars pass from a conveyor to an automatic

(*Continued on page 276*)



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We have no yearly models—but improvements and refinements are being constantly added to Colton machines.

There are over five hundred Colton Rotaries in use.

Superior design, sturdy construction and ease in operation have made this possible.

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There is a Resinox compound for every molding purpose. On difficult molding jobs you will especially appreciate Resinox quality. Our technical staff will gladly assist your molder, in his own plant, to overcome the problems which might confront him.

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PACKAGING IN GLASS

By Karl L. Ford*

WITH the increased application of color to modern packaging the versatility of glass acquires further significance when one fully appreciates the adaptation of glass to a wide variety of fields. Glass in any form is just glass to many of its users. Their experience along certain lines has acquainted them with one or more of its physical properties confirming their opinion, either favorable or unfavorable, of glass. But in reality there exists a wide variety of glasses possessing a similar variation in physical properties. Adjustment of its chemical composition can change physical properties by a ratio of two to one or even greater ratio. Such changes are made to adopt glass for specific uses in industry.

In the field of optics glass serves a number of purposes for which chemical composition is carefully controlled. The refractive index can be varied; light rays can be transmitted or absorbed, as desired. Some glasses transmit ultra-violet and no visible, or the reverse. Others transmit the ultra-red and no visible or the reverse. We can now obtain special window glass which transmit the ultra-violet rays of sunlight. Each of these, while of the glass family, shows different properties and widely varying applications.

Chemical glassware must withstand corrosive action and sudden temperature shock of rapid heating and cooling. Here chemical resistance and a low coefficient of expansion are essential properties. These are obtained by manufacturing a glass which differs radically from any other member of the glass family. The extent to which many special properties are developed beyond the common lot in a measure determines its cost, because of the additional expense of manufacturing, high melting temperature or special and expensive batch ingredients.

The color of glass is one property which can be varied throughout a vast range of shades practically the entire spectrum. Some of the more common colors, green, blue, amber and black are familiar to most every one. In this instance the color of the glass itself is referred to not any applied color.

Perhaps before considering the color effects obtainable in glass a brief discussion of the various optical characteristics of glass might be considered.

Most of us are familiar with the spectrum produced by a glass prism, and we appreciate that white light is composed of many colored rays. Now when any light rays strike a surface of glass exactly perpendicular to the glass it passes through without change. If, however, it strikes at an angle the colors are dispersed, but if the opposite surface of the glass is parallel to the initial surface as in a window pane the colors unite and emerge as white light. The amount of this dispersion of the colored light varies with the composition of the glass.

Each ray of light on entering a surface of glass at an angle is bent toward the perpendicular and on leaving it is bent away an equal amount provided the glass surfaces are parallel, but if not the ray of light is bent away from the original direction. This characteristic of minerals which is high accounts for the great brilliance of the diamond and the play of color of certain types of glasses used principally for table and decorative ware.

By combining glasses which have different degrees of dispersion and refraction the colors of simple lense systems are removed.

One other characteristic of glass is absorption. While we may not realize it any amount of light which passes through an object is less than that which enters by the amount reflected from the incident surface and that absorbed. The amount of light absorbed by glasses varies with the type of glass and the thickness. The light reflected may be diffused by a rough surface.

The light absorbed may be evenly distributed in all colors and that transmitted is almost pure white light, but such glass is quite rare. Usually there is a selective absorption producing one color or several colors combined. The resulting color depends upon the amount and color transmitted.

The absorption of individual colors results from certain ingredients in the glass. Some of these exist in the raw material as impurities and the production of a neutral glass transmitting white light is obtained by purposely adding small amount of materials which neutralize the color of the impurities. The added materials pass complimentary color to that of the impurity and absorb its characteristic color producing a neutral light. How little light is absorbed is apparent from the high transmission of the ordinary clear glass container.

When colored glasses are desired a sufficient amount of some oxide or element is added to give the selected color absorption desired and produce a color which in many cases may be a mixture of colors only, apparent from a transmission curve—that is a record obtained by measurements of the amount of each color transmitted.

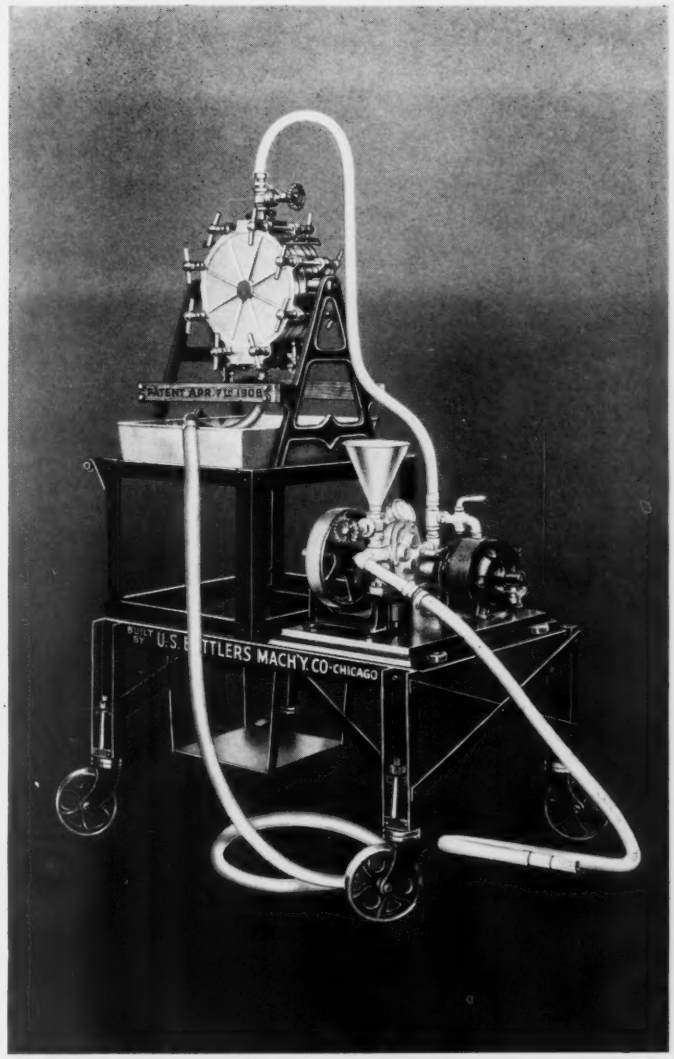
Since each ingredient has definite absorptive properties which vary accordingly to amount present and several may be added the possibilities of innumerable shades is apparent. However, as commercial glass for containers is melted in large tanks in enormous quantities only a relatively few of the many possible are produced. These, however, in green, blue and amber represent much development work on the part of glass manufacturers to produce glass of high transmission and attractive shades.

At the present time much work is being done by glass manufacturers on the production of colored glass. Pink, yellow, various shades of amber and purple glasses are available in table ware.

The colors referred to are termed direct as the coloring materials are added to the batch to be melted and the colors are produced in the melting operation—no subsequent operation is required to produce the color. Other colors are obtained by reheating the glass. Some colors are only obtained by repeated heating. Such colors because of the manufacturing cost are not available except in expensive decorative ware.

*Glass Container Association

FILTERS
for Every Purpose



U. S. Multiple Disc Drum Filters are famous throughout the world for handling a wide variety of products such as pharmaceuticals of every nature, syrups, perfumes, lotions, and other liquid cosmetics. For brilliancy and high polish, products filtered on units of this kind have never been surpassed. A wide choice of filtering mediums is offered so that the user can employ whatever combination is necessary to his product, whether it be asbestos, paper of various kinds, or cloth, etc. Every U. S. Drum Filter sold, whether it be as a separate unit consisting of the filter alone, or one of our convenient combination outfits such as the one illustrated here, is guaranteed absolutely to achieve the results required. Each problem is treated individually by our engineers and detailed instructions given for the handling of your individual products. Write for our new catalog on filters which tells the complete story of efficient filtering.

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Murine Eye Remedy Co.	*Eye Remedy*
McKesson-Van Vleet-Ellis Corp.	*Medicines*
Andrew Jergens Company	*Cosmetics*
W. T. Rawleigh Company	*Oil of Geranium*
S. Pfeiffer Mfg. Co.	*Pharmaceutical Preparations*
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Nine years of *Satisfactory labeling* at the Mentholatum plant

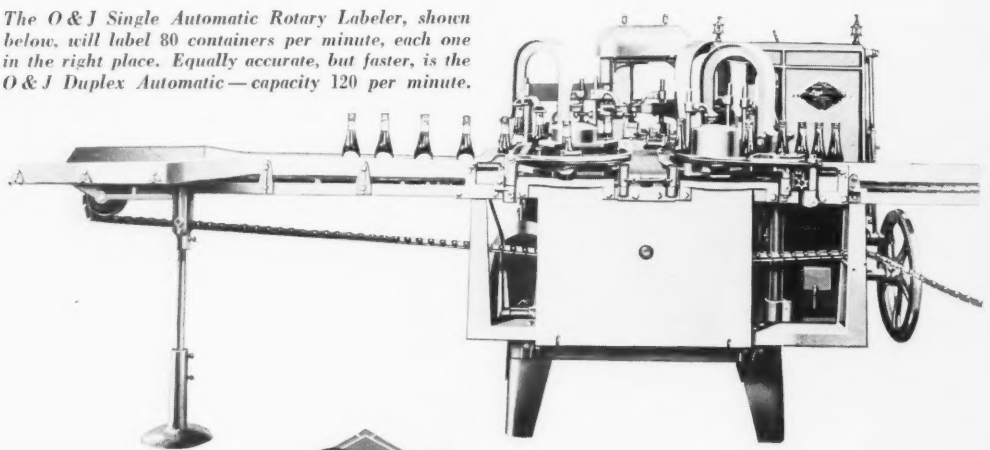
Two O & J veterans have been at it, cutting the labeling costs of a famous product—MENTHOLATUM—for a period of nine years with practically no interruption.

"Our two O & J automatics," writes P. H. Hyde, Vice-president of The Mentholatum Company, "have now been in use about 9 years and have been very satisfactory indeed."

O & J Automatic Rotary Labelers—single or duplex—make it possible to attach labels to containers accurately, neatly and economically. Their volume output cuts labeling costs and their mechanical perfection assures getting the label in exactly the same place every time.

And back of each O & J installation is a service staff, composed of the industry's foremost technical men, *as interested in prolonging the usefulness of machines in operation as in the sale of new ones.* Whatever your labeling problems may be, consult the local "Liquid" representative. Or write to Dept. L-53.

The O & J Single Automatic Rotary Labeler, shown below, will label 80 containers per minute, each one in the right place. Equally accurate, but faster, is the O & J Duplex Automatic—capacity 120 per minute.



Liquid

THE LIQUID CARBONIC CORPORATION

O & J Labeling Machine Division

3100 South Kedzie Avenue, Chicago, Illinois

News

Associations

New Drug Dinner Record

Over 750 representatives of the drug and allied trades, the largest gathering ever to attend this function, were present at the seventh annual dinner of the drug, chemical and allied trades, sponsored by the Drug and Chemical section, New York Board of Trade, at the Hotel Commodore, New York, March 15.

Percy C. Magnus, chairman of the section, presided, and presented as toast-

P. C. Magnus

R. D. Keim

master R. D. Keim, sales manager, E. R. Squibb & Sons. Speakers of the evening were Gilbert T. Hodges, president of the Advertising Federation of America and a member of the executive board of the New York Sun; and Lowell Thomas, nationally-known radio figure.

Those seated at the speakers' table, in addition to the above-mentioned persons, included Frank Blair, president, Proprietary Association; W. J. L. Banham president, New York Board of Trade; H. Bates Bertram, president, American Manufacturers of Toilet Articles; Royal Copeland, United States Senator from New York; Roblin H. Davis, president, The National Wholesale Druggists Association; Carson P. Frailey, executive vice-president, American Drug Manufacturers' Association; Samuel C. Henry, secretary, The National Retail Druggists Association; Nicholas H. Noyes, president, The American Drug Manufacturers' Association; John G. Searle, president, the American Pharmaceutical Manufacturers' Association; Evans Stone, president, The Insecticide and Disinfectant Manufacturers' Association; J. Barstow Smull, president, The New York State Chamber of Commerce; Ira Vandewater, president, The Salesmens' Association; and Warren Watson, president, Manufacturing Chemists' Association.

Drug Club Elects

S. B. Penick, S. B. Penick & Co., has been elected vice-president; Joseph Huisking, Charles L. Huisking & Co., has been elected secretary; and A. A. Wasserscheid, treasurer of the Drug and Chemical Club, New York. Charles J. A.

S. B. Penick

Fitzsimmons, Orbis Products Trading Co.; Francis J. McDonough, New York Quinine and Chemical Works; and Albert A. Teeter, Charles Pfizer & Co., have been elected members of the board of governors. F. H. Leonhardt, Fritzsche Brothers, Inc., retiring president of the club, was presented with a bronze desk set.

A. D. M. A. Meeting Plans

The committees which will arrange and conduct affairs in connection with the twenty-first annual meeting of the American Drug Manufacturers' Association, in White Sulphur Springs, W. Va., April 18 to 21, are headed by A. D. Armstrong, Fritzsche Brothers, Inc., as chairman, and A. A. Wasserscheid, Mallinckrodt Chemical Works, as assistant chairman. The members of the committee groups are:—

Evening entertainment—J. J. Kerrigan, Merck & Co.; Francis J. McDonough, New York Quinine & Chemical Works; James T. Pardee, Dow Chemical Co.

Golf—Victor Williams, Monsanto Chemical Works; Harold W. Simpkins, Mallinckrodt Chemical Works; Melville Eaton, Norwich Pharmacal Co.

Ladies entertainment—A. A. Wasserscheid, Mallinckrodt Chemical Works; George Simon, Heyden Chemical Corp.; James T. Pardee, Dow Chemical Co.; Percy C. Magnus, Magnus, Mabee & Reynard, Inc.; John P. Remensnyder, Heyden Chemical Corp.

Transportation—Albert A. Teeter, Charles Pfizer & Co.; S. Barksdale Penick, jr., S. B. Penick & Co.

The Committee on Sales and Advertising Problems, Mr. S. DeWitt Clough, chairman, will hold its session on Thursday, April 21st, at Nine A. M. The following program has been arranged: "How Manufacturers Can Cooperate with the Wholesale Drug Trade," by Mr. E. L. Newcomb, executive secretary, national Wholesale Druggists' Association; "How Manufacturers Can Cooperate with the Retail Drug Trade," by Mr. Samuel C. Henry, executive secretary, National Association Retail Druggists; "How Manufacturers Can Cooperate with the Council on Pharmacy and Chemistry, of the American Medical Association," by Dr. Paul N. Leech, director, American Medical Association Laboratories; "Incentive Compensation of Sales Organizations," by Mr. Carle M. Bigelow, M. E., president, Bigelow, Kent, Willard & Co.

People

Carl Weeks College Head

Carl Weeks, president, Armand Co., has been elected president of the Des Moines College of Pharmacy. Other officers include L. H. Chamberlain, vice-president of Chamberlain Laboratories, second vice-president; F. W. Fitch, F. W. Fitch & Co., third vice-president; and M. E. Sherman, Des Moines Drug Co., director.

Bailey, Schieffelin Director

Clarence D. Bailey has been elected a director of Schieffelin & Co., succeeding Howell Foster. Mr. Bailey becomes second vice-president and treasurer of the company.

Carl Perillo Joins Ayer Co.

Carl Perillo, Jr., formerly assistant to the vice-president of Lionceau, Inc., is now in charge of sales, Pacific Coast territory for The Ayer Co., Vita Ray division.

Louis James Joins Puritan

Louis James, formerly with Prichard & Constance, has accepted a position as special representative with Puritan Cosmetics, Inc., St. Louis.

C. H. Palmer R. R. Director

Carleton H. Palmer, president of E. R. Squibb & Sons, New York, has been elected a director of the Long Island Railroad.

New York Branch Entertains

New York branch of the American Pharmaceutical Association, acted as host to delegates from District No. 2 at a dinner and entertainment at the Hotel Pennyslvania, March 14

Cancer Chemical

Drs. H. Burrows, I. Hieger and E. L. Kennaway of the Research Institute of the Cancer Hospital, London, England, are reported to have synthesized a chemical which produces cancer in mice and rats. What particular element in the compound produces the disease is thus far unknown. The technical name of the compound is 1:2:5:6—dibenzanthracene, a hydrocarbon of the benzanthrene group.

Foster Retires from Scheiffelin

Howell Foster, since September 4, 1882, associated with Schieffelin & Co., New York, wholesalers, and since March 6, 1911, a vice-president of the company, retired from active business March 1. At the annual sales banquet, February 13, W. J. Schieffelin, Jr., president of the company, presented him on behalf of his friends in the company with sterling silver plate suitably inscribed. At a meeting of the board of directors, January 29, a resolution was adopted commemorating his fifty years of service to the company.

J. C. Cox—Simpson Treasurer

Simpson, Inc., Chicago, announces that James S. Cox, formerly treasurer, W. C. Ritchie & Co., has been elected treasurer of the company.

Beecham's Lab. Moves

Beecham's Laboratory, cosmetics, announces its removal to Millwood, N. Y.

Harold King Starts Business

Crude Drug Importers, Inc., New York, has been incorporated with capital of 250 shares without par value, by Harold King, for many years in charge of the New York office of McLaughlin, Gormley, King, Minneapolis, later senior partner in the firm of King & Howe, and more recently in the employ of the United Chemical & Drug Corp. The new company is located at 123 William st., New York.

Stearns Appoints Oren

Frederick Stearns & Co., Detroit, has appointed W. A. Oren, former president N. A. R. D., sales representative in northern and central Indiana.

Sharp & Dohme Directors

Sharp & Dohme, Inc., Philadelphia, has added to the board of directors Ellery S. James, partner in the firm of Brown Bros., Harriman & Co., and Stanley B. Resor, president, J. Walter Thompson Advertising Co.

Gulick Heads Nat. Oil

Charles P. Gulick, general sales manager, National Oio Products Co., Harrison, N. J., has been elected president of the company, succeeding Mark A. Richards.

Ed. T. Beiser Appoints

Edward T. Beiser Co., Inc., Riverside, Conn., announces appointment of D. P. Fellows as member of its New England sales staff and James W. Powers as member of the mid-western sales staff.

Curt Wimmer Honored

In commemoration of his twenty-five years of service to the Columbia University College of Pharmacy a dinner was tendered Professor Curt P. Wimmer on the evening of February 25th, 1932, in the Grand Ball Room of the Hotel New Yorker, New York. The affair was held

Curt P. Wimmer

under the auspices of the Alumni Association of the College with the assistance of various pharmaceutical, industrial and civic organizations. Professor Harry Taub, president of the Alumni Association acted as toastmaster and among the speakers were W. Bruce Philip, President-elect of the American Pharmaceutical Association and classmate of the guest of honor, and Dean Emeritus H. H. Rusby.

Davis Joins Dow Drug

Charles H. Davis, for a number of years with the Walgreen Co., Chicago, and, before that, with the Louis J. Liggett Co. has been appointed advertising manager in charge of purchase, sales, advertising and display of Dow Drug Co., Cincinnati.

TESTIMONIAL DINNER
CURT P. WIMMER, A.M., Ph.M., Phar.D.
ASSOCIATE DEAN
of the Alumni Assn. College of Pharmacy
Columbia University
HOTEL NEW YORKER FEB. 25th 32

Testimonial Dinner to Dr. Curt P. Wimmer

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Greilsamer Rejoins Coty

Raymond Greilsamer, who resigned last April as managing director of Coty, S. A. Paris, has been recalled by the administrative board and resumed his old position.

J. L. Stummer Joins George Silver

Joseph L. Stummer, formerly on the staff of Parfumerie Rigaud and since 1923 consulting chemist, has been placed in charge of the research department of George Silver Import Co., which department will furnish consulting service to cosmetic manufacturers.

Frank P. Hlad Resigns

Frank P. Hlad has resigned his position as plant superintendent in charge of manufacturing with the Absorbent Cotton Co. of America, Valley Park, Mo., a subsidiary of the United Drug Co., manufacturer of surgical dressings, etc.

Douglas with Tanna-Menthol

R. C. Douglas, for seven years with the H. J. Heinz Co., has become secretary-treasurer and sales manager of the Tanna-Menthol Co., Tulsa, Okla.

Mehron Cosmetics Plant

Mehron Cosmetics Co., New York, has moved its offices and laboratories to 517 Bergen st., Brooklyn, but will maintain its salon at 562 Fifth ave., New York.

Dunn Visits Home Office

Dr. F. J. Dunn, manager of the Chicago branch, W. J. Bush & Co., recently visited New York for the purpose of discussing matters of policy with the executives of the organization.

George Uhe Moves

George Uhe, New York, broker, announces removal of his offices to 102 Maiden Lane, that city.

C. P. Harris Moves

Clarence P. Harris, New York, industrial chemist, announces removal of his office and the establishment of a newly equipped laboratory at 174 Madison ave., New York.

Dr. Chamberlain Joins Nat. Oil Pts.

Dr. Dale S. Chamberlin, former associate professor of industrial chemistry and chemical engineering, Lehigh University, has become associated with the research staff of the National Oil Products Co., Harrison, N. J.

Riggs with American Products

Harold S. Riggs, formerly assistant advertising manager of The Globe-Wernicke Co., Cincinnati, has joined the American Products Co., manufacturing chemist of that city, as sales promotion manager.

Sheldon Heads Amer. Institute

Dr. H. H. Sheldon, physicist and engineer, member of the firm of Sheldon, Morse, Hutchins & Easton, has been elected president, The American Institute of the City of New York. He succeeded A. Cressy Morrison who was elected to the board of trustees. The other officers elected were Dr. Otis W. Caldwell, vice-president; Dr. William Crocker, secretary; Alfred Knight, treasurer.

Crystal Chemical Officials

Crystal Chemical Co., New York, drugs and cosmetics, has elected the following officers: chairman of the board, Dr. D. P. Gillespie; president, Myram Picker; secretary, Sidney Picker.

Companies

Zonite Buys Annette

Zonite Products Corp., New York, drugs and cosmetics, has acquired the Annette's Perfect Cleanser Co., Boston, manufacturer of a powder for removing stains from textiles and furs. The purchase price was in the neighborhood of $150,000, the acquisition involving the transfer of 18,000 shares of Zonite stock which had been bought in the open market at between $8 and $9 a share. Earnings of the Annette company are reported to be running at the rate of about $2 a share on the 18,000 shares involved.

Zonite Products Corp. has reported for 1931 consolidated net profits of $953,177 after depreciation and interest, compared with $750,608 in 1930.

Schieffelin Convention

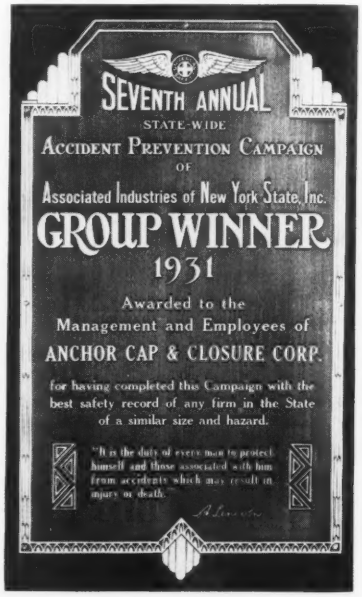
Schieffelin & Co., New York, wholesaler, held its annual convention in that city February 11 to 13. Among those who spoke at the various meetings were W. J. Schieffelin, Jr., president; E. B. Livingston sales manager; Howell Foster and Seth W. Heartfield, vice-presidents; and W. L. Brower, a former director of the company.

F. D. Snell Merger

Foster D. Snell, Inc., Brooklyn, chemists and engineers, announces that the Official Testing Laboratory has been merged with its own interests, and that R. O. Brooks, director of the Official Testing Laboratory, has become a member of the technical staff of the Snell organization.

Anchor Cap Rewarded

Anchor Cap & Closure Corp., Long Island City, has been awarded a group trophy for its excellent record in accident prevention among employees during 1931 awarded in the seventh annual Accident


SEVENTH ANNUAL
STATE-WIDE
ACCIDENT PREVENTION CAMPAIGN
OF
Associated Industries of New York State, Inc.
GROUP WINNER
1931
Awarded to the
Management and Employees of
ANCHOR CAP & CLOSURE CORP.
for having completed this Campaign with the best safety record of any firm in the State of a similar size and hazard.
"It is the duty of every man to protect himself and those associated with him from accidents which may result in injury or death."

Prevention Campaign of Associated Industries of New York State, Inc. The group for which this campaign was awarded included all plants engaged in stamping and forming operations. The company's score for the duration of the campaign was 100 per cent. which means that no time was lost by any of its hundreds of employees as the result of an accident. Only one other company had a perfect record in this regard and the award was made to Anchor on the comparative number of working hours involved which was greater than that of the other company concerned.

Towns & James—A Corporation

Towns & James, Brooklyn, wholesaler, has announced a change from co-partnership to corporation, although no change has been made in ownserhip or policies of this house established in 1885. Officers of the corporation are president, John W. James; vice-president, Halsted James; secretary and treasurer, William L. James. Together with W. Rutherford James and William G. James they make up the board of directors of the company.

Northwestern Drug Officers

Northwestern Drug Co., Minneapolis, wholesaler, re-elected the following officers: president, J. P. Jelineck; vice-presidents, G. V. Williams and John Vold; secretary-treasurer, L. E. Seiverlich. J. H. Marshall was retained as general manager.

Your PACKAGE *is your* TOTEM POLE . . .

It should instantly identify your product or your line of products.
It should proclaim fine contents by means of fine design.
It should arouse the desire to buy—and buy again.

To achieve these ends your package must have more than mere color; it must have pleasing lines; it must have well conceived lettering, artistically executed;—above all it must have compelling modern design.

Few artists possess the ability to create modern designs without allowing them to become "modernistic". There is nothing "modernistic" about the designs we create. They are simple, straightforward conceptions, striking, but in superb taste.

But apart from the artistic side, the package must be *economically* and *practically* constructed.

We have a thorough understanding of chemical, production, cost, and merchandising problems—and we know design.

Every package we create for you will be tangible evidence of superior design ability and will have the advantage of a practical knowledge of packaging materials and years of experience in the production of packaged products.

In the covers of this issue may be seen the work of Mr. Schaedler. Observe the striking use of color, the easily comprehended simple design elements, and the finesse of the lettering.

Chilson & Schaedler

101 WEST 31st STREET
NEW YORK CITY
CHickering 4-0437

Package Design Production Engineering

Owl Stockholders Sue Drug

Suit has been filed in the California Superior Court, Los Angeles, by minority stockholders of the Owl Drug Co. against Drug Inc., Louis K. Ligget Co., United Drug Co. and the directors of the Owl Drug Co., Louis K. Liggett Co. and United Drug Co., the last three named being subsidiaries of Drug Inc. Damages totaling $15,000,000 are sought in the action which was filed by W. W. Hindman, a preferred stockholder of the Owl Drug Co. and member of the law firm of Hindman & Davis, Los Angeles.

The defendants are charged with mismanagement of the Owl Drug Company's properties, it being further alleged that the company has become or is about to become insolvent, while it is also charged that the company's liabilities exceed its assets. An accounting is asked as well as an injunction to restrain the management from entering further contracts for the Owl Drug Co.

Drug Inc. acquired control of the Owl Drug Co. in January, 1930, it is asserted in the action, through the purchase of 40,000 shares of voting common stock. It is charged that, since acquiring control the defendants have closed certain of the company's production plants, and are using the Owl retail stores as outlets for the sale of goods manufactured and dealt in by the three defendants.

Schering Corp. Changes

Schering Corp., New York, announces a change in its sales arrangements by which the company will devote its activities entirely to the sale of medicinal specialties. A new affiliated company has been organized called Sherka Chemical Co., Inc., which takes over exclusive importation and distribution in the United States of pharmaceutical and industrial chemicals manufactured by Schering-Kahlbaum A. G., Berlin, Germany, with which the Schering Corp. is affiliated. Offices of both this latter organization and the Sherka Chemical Co., will be maintained at 110 William st., New York.

Boncilla Exports

The largest shipment of Boncilla products ever leaving for a foreign port was recently sent to J. C. Gambles & Co., Ltd., distributors for Boncilla Laboratories, Inc., Indianapolis. The shipment was for England, Scotland, Wales and Ireland.

Burt Buys Hefter & Co.

F. N. Burt Co., Ltd., Buffalo, N. Y., has purchased the equipment, name, good will, fixtures, trucks, etc., of Hefter & Co., Inc., paper box manufacturers, Brooklyn.

Coty Checks Rainbow Stores

Coty, Inc., New York has secured judgments against Rainbow Cosmetic Stores, New York, operated by Eugene J. and Howard Kestenbaum, and Singer's Cut-Rate Perfume Shops, New York, operated by Irving Singer, restraining them from "stating or representing in any manner to anyone that plaintiff's face powders and other products are impure and/or dangerous to use and/or detrimental to the skin and/or that they contain lead or zinc or other chemical detrimental to the skin; and making any statements or representations which are injurious to the reputation of plaintiff's products and/or any of them."

Consultants Move

Sheldon, Morse, Hutchins & Easton, New York, consultant in the marketing of industrial products, announces the removal of its offices to 420 Lexington ave., that city.

Abbott English Distribution

Abbott Laboratories, Inc., has arranged with the Abbott Laboratories, Ltd. Canada, to assume the production and distribution of Abbott specialties throughout the British Empire with the exception of India. The sales office will be established in London. This arrangement will enable the company to meet the situation growing out of adverse differences of exchange between the United States and Canada and the British Empire generally; resulting from the English abandonment of the gold standard, and the new British tariff policy.

A branch of the Abbott Laboratories has been established in Los Angeles to succeed the agency operated as the John S. Miller Co. John S. Miller, Jr., becomes branch manager.

Boston Sales Agency

Jack Dowd, until recently merchandising director, Eastern Advertising Co., has set up a new company called New England Merchandisers, Inc. with headquarters in North Station Industrial Building, Boston. It offers to national advertisers in the drug, grocery and candy trades a field force of 25 resident experienced merchandising salesmen who will make a coverage of the retail trade in these fields 12 times a year. This service includes monthly sales coverage of drug and grocery retailers, weekly coverage of jobbers and chain store buyers, product research, merchandising counsel, direct advertising—including the placing of point-of-purchase advertising material—and preparation and mailing letters to the most comprehensive and reliable mailing list in the retail drug and grocery fields in New England.

Milnesia Bankrupt

Schedules have been filed by Milnesia International, Inc., New York, listing the following: Liabilities $160,192, assets $55,411, main item being accounts, $54,375. Principal creditors listed are Herbert Turrell, $37,562, secured; liquidating committee Plaza Bank, $12,562; Matzyme Products Corporation, $26,944; Allan S. Locke, $16,215; Bronson Batchelor, $7,424; M. W. Harrison, $23,875 and Milnesia Laboratories, Inc., liabilities $81,288, assets $15,421, main item being stock, $15,218. Printed creditors listed are McKesson & Robbins Company, $7,750; Milnesia International, Inc., $44,052; Allan S. Locke, $5,000; Select Drug Products, Inc., $5,778.

S. F. Baker Insures

S. F. Baker & Co., Keokuk, Ia., proprietaries, has announced adoption of a cooperative group life insurance program which provides $1,000 life insurance for each eligible employee.

Monsanto Yearbook

Monsanto Chemical Works, St. Louis, has issued its thirtieth annual report in the form of a very attractive 27-page yearbook featured by very interesting and attractive photographs visualizing the company's progress. A note at the end of the book calls attention to the fact that the paper was manufactured with aluminum sulfate produced by the company and the printing ink deodorized by a new application of another Monsanto product.

Iodine Therapy

An exhaustive study of the subject of Iodine Therapy by the internationally-known authority, Dr. Hermann Prinz, has just been published by the Iodine Educational Bureau. This study contains a complete history of Iodine, which was discovered in 1811 by the French chemist, Bernard Courtois, and information regarding its preparation, properties, and its medical and particularly its dental uses, including a comprehensive formulary. Dentists or dental students who have not received one of these booklets are invited to write to the Iodine Educational Bureau, Inc., New York, for a copy.

Gane & Ingram Booklet

Gane & Ingram Inc., New York, pharmaceuticals, is distributing an interesting booklet containing formulae for every-day uses. The formulae comprise preparations well suited to specialties for the retail druggist and represent the latest advances in pharmaceutical preparations. Any druggist wishing a copy should write to Gane & Ingram Inc., New York.

AN ADHESIVE FOR EVERY MACHINE OR HAND OPERATION

What Price Cheapness?

What does a Glue really cost? Certainly the price you pay is only a small part of the true cost.

Operating Economy is what counts! Hard to measure, but so very real nevertheless, that more and more manufacturers are using

MIKAH
ADHESIVES

They have found that they can thus —

DECREASE WASTE
ELIMINATE SHUTDOWNS
SPEED UP PRODUCTION
DECREASE OPERATING EXPENSE

Their continuing satisfactory experience is your warranty and protection.

NATIONAL ADHESIVES CORPORATION

Home Office—820 Greenwich St., New York

1940 Carroll Ave., Chicago — 883 Bryant St., San Francisco
15 Elkins St., Boston — 1305 Germantown Ave., Philadelphia

WORLD'S LARGEST PRODUCER OF ADHESIVES

Sales Offices in all principal cities

ART TUBE COMPANY

IRVINGTON, N. J.

. . . two more presses . . .
are being added . . . to our front line . . . of production . . . looks like 1932 . . . will be another "biggest" year . . . for ART TUBES . . . we've a nice spot . . . and a dandy price . . . for a 50,000 gross user.

Container Drops Gibralter

Container Corporation of America has relinquished ownership of the Gibraltar Corrugated Paper Co., North Bergen, N. J., and the plant has been taken over by the Gibraltar Corrugated Paper Co., Inc., a New Jersey corporation headed by Samuel Katz, as president; J. C. Lewis, vice-president; R. F. Westgate, treasurer, and H. S. Cohen, secretary. The company comprises 10,000 shares of common stock and $75,000 preferred stock.

D. & O. Pepperment Chart

Dodge & Olcott Co., New York, has issued a chart of peppermint oil prices, on which a red-line graph shows quotations for natural peppermint oil from 1894 to 1931 inclusive. According to the chart, the lowest price during the period of thirty-eight years was 50 cents per pound, which quotation prevailed in the first quarters of 1898 and 1899. The highest price was $28.50 per pound, reached in December, 1925, following which there was a steady and almost continuous decline in quotations.

National Phar. Mfg. Moves

National Pharmaceutical Manufacturing Co., Baltimore, has announced the removal of its plant to larger quarters at 316 Light st., that city. Old address was 311 South Charles st.

Godefroy Mfg. Birthday

Godefroy Manufacturing Co., St. Louis, cosmetics, recently celebrated its fiftieth anniversary.

Aluminum Seal Research

Aluminum Seal Co., New Kensington, Pa., has formed a market research committee which will concern itself with technical and laboratory products relating to container design and consumer buying habits. The committee is headed by J. E. Sharp, vice-president of Aluminum Seal, and comprises: Donald H. Tilson, sales manager; E. Frank Anderson, assistant sales manager; A. G. Osborne, head of the company's laboratory; R. M. Wareham, service manager, and Emerson E. Hogg, in charge of field service work.

Joy-Synth Reorganizes

Joy-Synth Co., Dallas, cosmetics, has been reorganized with Elmo Tenison as general manager.

Paris Labs. Moves

Paris Laboratories Co., Inc., St. Louis, has moved into larger quarters in that city.

Ex-Cel-Cis Developments

Ex-Cel-Cis Products Co., Salt Lake City, cosmetics, has opened a branch in St. Louis. Officers of the company are president, N. H. Tanner; vice-president and business manager, Lynn R. Fairbanks; secretary and treasurer, Frank Fairbanks; assistant manager, Lois A. Fairbanks; laboratory manager, Sterling Fairbanks.

M. M. & R. Join

Magnus, Mabee & Reynard, Inc., has been elected to associate membership in the Insecticide & Disinfectant Manufacturers' Association.

Sodium Benzoate Beads

Seydel Chemical Co., Jersey City, announces that it is now producing and marketing sodium benzoate in the form of tiny beads.

F. D. Snell House Organ

Foster D. Snell, Inc., Brooklyn, chemists and engineers, has issued the first number of a very interesting house organ entitled, "The Chemical Digest."

Laird English Plant

R. H. Laird Co., New York, cosmetics, plans to establish a plant in London for the manufacture of its products.

John Wyeth Representatives

John Wyeth & Bro., Inc., Philadelphia, has appointed the following representatives: Fred A. Hoch, St. Louis; E. J. Stava, Los Angeles; and Harold D. Pilchard, Seattle.

American Beauty Name Change

American Beauty Co., New York, has announced a change of name to American Beauty Nail Polish Co., Inc.

Sherwood Takes Mutual Plant

Sherwood Refining Co., Warren, Pa., subsidiary of Sherwood Petroleum Co., Inc., Brooklyn, has taken over the plant formerly operated by the Mutual Refining Co. of Warren.

New Products

MEEDS' PROTEK

Meed Co., Kansas City, Mo., is marketing a new tooth powder called "Protek."

AREX

Arex Products Co., Lafayette, Ind., has announced "Arex", an endorcine tablet for constipation.

JOHNSON'S ARLISS GAYLORD

Johnson Co., Oakland, Calif., is now manufacturing a general line of cosmetics merchandised throughout the state of California under the trade name, "Arliss Gaylord".

PANACOIDS

Reed & Carnrick, Jersey City, N. J., has announced a new addition to its line sold under the trade name, "Panacoids." These consist of desiccated pancreas and desiccated duodenal substance protected by an effective enteric coating. They are recommended for use in all forms of intestinal indigestion and in functional disorders of the pancreas. Each tablet contains two grains of desiccated pancreas and one grain of desiccated duodenal substance.

A. M. A. Accepts

SODIUM IODOBISMUTHITE

Sodium bismuth iodide.—A compound formed by the interaction of bismuth chloride and sodium iodide in ethyl acetate solution, consisting essentially of hydrated sodium iodobismuthite (sodium bismuth iodide) Na_3BiI_2, with inorganic salts. It contains approximately 21 per cent bismuth (Bi), 62 per cent. iodide (I^-) and 11 per cent. water of hydration. Actions and Uses.—It is claimed for this new bismuth preparation, sodium iodobismuthite, that it has the quality of appearing in the spinal fluid and of penetrating the brain tissue.

Sodium iodobismuthite occurs as a red crystalline compound, odorless, or having only a faint acetic or ethyl acetate odor, permanent in dry air and possessing an astringent taste. It yields a clear solution with one part water; on moderate dilution of the solution, sodium iodobismuthite hydrolyzes to form a black precipitate of bismuth iodide in a finely divided state, while on further addition of water the black precipitate changes to red bismuth oxyiodide. Hydrolysis may be retarded by the addition of acids or alkali iodides. The aqueous solution is neutral or faintly acid to litmus. Sodium iodobismuthite dissolves readily and without decomposition in ethylene-glycol, propylene glycol, glycerin, anhydrous alcohol and ethyl acetate; it is insoluble in absolute ether, chloroform, carbon disulphite, petroleum ether, fixed oils and liquid petrolatum.

IODOBISMITOL

A solution of sodium iodobismuthite (sodium bismuth iodide) in ethylene glycol containing 0.1 per cent. acetic acid. Each cubic centimeter contains sodium iodobismuthite equivalent to 0.012 to 0.0138 Gm. bismuth (0.0577 Gm. to 0.0664 Gm. sodium bismuth iodide) and 0.109 Gm. to 0.129 Gm. sodium iodide. The total iodide is equivalent to 0.159 Gm. to 0.171 Gm. sodium iodide per cubic centimeter.

Actions and Uses.—Iodobismitol seems to be well absorbed and to be excreted fairly rapidly. In laboratory animals the

T.L. BEESWAX

80 Years of Continuous Business

T. L. WHITE BEESWAX

¶ T. L. PURE WHITE BEESWAX, Extra Quality, is prepared from the highest and most costly grade of crude beeswax. It is most carefully selected at its source and again, on arrival at the T. L. factory, examined piece by piece. Doubtful pieces are rejected. It is 100% pure and higher than U.S.P. Standards. ¶ Throughout the process of bleaching, the original characteristics of the high grade crude beeswax are retained, resulting in a product of extraordinary value to the cream manufacturer. The high melting point and character of T. L. PURE WHITE BEESWAX imparts to the product a very high emulsion value. This property enables the cream manufacturer to use less beeswax in the preparation of the cream and with the assurance that the emulsion is permanent. ¶ T. L. WHITE BEESWAX has been the standard of quality for EIGHTY YEARS. Its constant uniformity gives the best results in making cold cream.

PIONEER BRAND

Pure Refined Yellow Beeswax

Extra Quality, 100% PURE and higher than U.S.P. Standard. Made from the same high grade crude beeswax as the T. L. Brand, excepting that it is not bleached white. Because of its natural light yellow color it is especially adapted for lemon creams and like preparations.

WESTERN DISTRIBUTOR

A. C. Drury & Co. 106 East Austin Avenue, Chicago, Illinois

THEODOR LEONHARD WAX CO.

HALEDON INCORPORATED PATERSON, N.J.

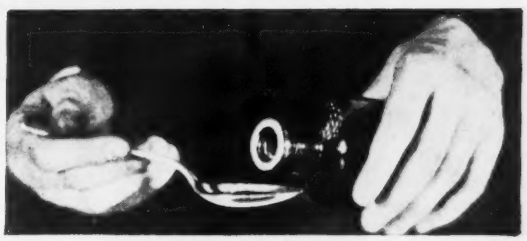
Packaging Account WANTED

ESTABLISHED

Manufacturers' Representative specializing in packaging service to Toilet Goods and Drug Manufacturers would like two additional accounts for metropolitan New York territory. Facilities include New York office and long standing acquaintance with the trade.

Write in confidence to Box 843

DRUG MARKETS



Announcing the New

"POUR-OUT"

A simple means of enabling one to pour out the contents of a bottle without having it drip over the side, is now available for large bottlers using automatic conveying equipment between filler and capper. It is unbelievably efficient !

This "POUR-OUT" is furnished with our C. T. Caps, and is automatically transferred to your bottle when cap is applied.

Submit samples of your product, and we will return them to you with our cap and "POUR-OUT" attached.

Invention covered by our Patent No. 1,837,618.

FERDINAND GUTMANN & CO.

Bush Terminal No. 19 **Brooklyn, N. Y.**

Bottle Closure Specialists Since 1890

"FILMASEALS"

Trade Mark Reg. *Pats. Pending*

bismuth enters the brain in from 90 to 100 per cent. of the cases, and in human beings treated with the drug it has been shown in the spinal fluid in over 90 per cent. of the cases. The claim is made for it that it will penetrate the brain in a great majority of persons treated.

Dosage—Intramuscular injections of 2 cc. repeated every three days. Two full days should elapse between injections. From eight to twelve injections comprise a course of treatment. A rest period of from two to four weeks should elapse between courses. At each injection the patient would thus receive from 0.024 to 0.0276 Gm. metallic bismuth (0.1154 to 0.1328 Gm. sodium bismuth iodide, and from 0.218 to 0.258 Gm. sodium iodide).

Manufactured by E. R. Squibb & Sons, New York, by license of Stanford University. U. S. patent applied for.

TRICHLOROETHYLENE

Trichloroethylenum—Trichlorethylene. —$CHCl{:}CHCl_2$—1-chloro-2-dichloroethylene. Actions and Uses.—The actions of trichloroethylene have not been investigated comprehensively, and it was introduced into therapeutics following some observations on man. Trichloroethylene appears to have a selective action on the sensory endings of the trigeminal nerve, whereby it affords relief in trigeminal neuralgia, but it is not clear that the action even of therapeutic doses is limited to these endings, and different individuals seem to show rather wide differences in susceptibility to this action; hence the dose necessary to afford relief varies correspondingly. Therapeutic doses sometimes cause transitory giddiness, with lassitude, distress, palpitation and nausea. Large doses cause narcosis, and excessive doses cause death. There was no perceptible injury to the lungs, heart or liver after narcosis repeated several times in the dog, but there was slight hyperemia of the gastric mucous membrane and marked reddening of the duodenum. The liquid is irritant; hence it should not be allowed to come in contact with the nose when the vapor is inhaled.

Dosage—Fifteen minims by inhalation, to be repeated after a few minutes if necessary; but it appears probable that not more than 60 minims should be inhaled within twenty-four hours when it is used for any considerable period of time.

Trichloroethylene occurs as a clear, colorless, mobile and volatile liquid, possessing an odor similar to that of chloroform. It is miscible with ether and very soluble in alcohol; it is practically insoluble in water. The specific gravity is from 1.458 to 1.460 at 25 C. The refractive index is from 1.4770 to 1.4780 at 20 C.

TRICHLORETHYLENE-CALCO

A brand of trichloroethylene-N. N. R. Manufactured by Calco Chemical Co., Inc., Bound Brook, N. J. No U. S. patent or trade-mark. Tubes Trichlorethylene-Calco, 1 cc.

SCHICK TEST, LILLY

Diphtheria Immunity Test (Schick Test) N. N. R., 1931, p. 383). Manufactured by Eli Lilly & Co., Indianapolis.

HORSE SERUM, LEDERLE

Normal Horse Serum, N. N. R., 1931, p. 346. Manufactured by Lederle Laboratories, Inc., Pearl River, N. Y.

SCARLET FEVER ANTI-TOXIN

Scarlet Fever Streptococcus Anti-Toxin, N. N. R., 1931, p. 353. Manufactured by the Gilliland Laboratories, Inc., Marietta, Pennsylvania.

A. M. A. Rejects

I-O-DINE LAB. PRODUCTS

Myodine, Subidin and Sanguiodin, manufactured by I-O-Dine Laboratories, Inc., Philadelphia, marketed by Eimer & Amend, New York, "because they are unscientific modifications of an official article marketed with unwarranted claims and indefinite and incorrect statements of composition under proprietary, uninforming names.

VEGE-SEA & KELP SALT

"Vege-Sea" and "Oro Brand Kelp Salt," distributed by Oakland Food Products Co., Oakland, Calif., "because they are marketed with claims that are unwarranted and misleading and because the recognition of proprietary names for these unoriginal preparations is not in the interest of rational therapy."

A. D. A. Accepts

NEO-SILVOL & SILVOL, P. D.

Neo-Silvol and Silvol, manufactured by Parke, Davis & Co., Detroit, U. S. patent and trade-mark applied for.

PLOUGH'S TOOTH PASTE

Plough's Tooth Paste, manufactured by Plough, Inc., Memphis.

A. D. A. Rejects

CAMPHOR-PHENIQUE

Campho-Phenique, manufactured by Campho-Phenique Co., St. Louis, "because a statement of composition is not given on the label tests to determine the constancy of the constituents are not furnished; it is marketed with unwarranted therapeutic claims; the principal label does not state the amount of phenol, a potentially poisonous substance; the name is objectionable because the Council cannot admit to A. D. R. under a proprietary name a simple solution of pharmacopoeial substances."

CALSODENT

Calsodent, Calsodent Co., New York, "because it is an unessential modification of salt; it is marketed with unwarranted therapeutic claims, and the name does not inform the user that salt is the main ingredient. The claims made by Calsodent go beyond those permitted by the Council for its consideration as a dentifrice, as decided therapeutic claims are made in its promotion."

Advertising

Industry's Ads Decline Further

The expenditure of $2,655,137 by the drug and toiletries industry for advertising in national magazines and national farm magazines during February was a decline of 16.4 per cent. from the figure of $3,196,608 registered a year ago. National magazines accounted for $2,592,277, a loss of 17.4 per cent., but the total of $62,860 for farm magazines represented an increase of 3.9 per cent., according to figures compiled from national advertising records by Dorrance, Sullivan & Co., New York. Sixty-two and seven-tenths per cent of the total in national magazines, or $1,626,668, went for beauty preparations and toilet goods, while 37.3 per cent., or $965,609, went for medical and proprietary items.

The cumulative total of expenditures in national magazines and farm magazines was $4,117,832 for the first two months of the year, 16 per cent. less than the $4,900,231 spent during the corresponding period last year. Four million fifteen thousand eight hundred and sixty-nine dollars was spent in national magazines, a loss of 16.3 per cent., and $101,963 was spent in farm magazines, a loss of two per cent.

A gain of 103.8 per cent. in the amount of radio broadcast advertising over national networks during January, from $432,974 last year to $881,484 this year, served to cancel the losses in magazines for the month. The total for all three media in January was $2,344,179, 9.7 per cent. ahead of the figure of $2,136,597 for January, 1931.

U. S. Adv. Corp. Formed

United States Advertising Corp., has been organized by Ward M. Canaday, Homer McKee and George Enzinger. Offices will be maintained in New York, Chicago, Toledo, and Milwaukee.

Mr. Canaday, president of the present United States Advertising Corp., Toledo and New York, is president and executive head of the new organization. Homer McKee, president of the Homer McKee Co., Inc., New York, Chicago and Indianapolis becomes executive vice-president. George Enzinger, president of Dyer-Enzinger, Inc., Milwaukee and Chicago, will be president of the Chicago division.

How To Do Away With "streaky" emulsions

Streaky, bubbly spots in your emulsions are signals which distinguish at a glance the faulty from the perfect emulsion. Even the amateur consumer can see them.

HOPKINS' FACTOLAC

TRADE-MARK REGISTERED

---used for both fixed and volatile oils---is a neutral emulsifier which creates creamy, homogeneous mixtures of oil and water and bars out the tell-tale streaks and bubbles. Neither thick nor viscid, HOPKINS' FACTOLAC is sure to give your product the smooth, creamy appearance of rich new milk. An actual tryout in your own emulsions will be well worth while.

WRITE FOR TEST SAMPLE, FORMULAS AND QUOTATIONS

J. L. HOPKINS & CO.

IMPORTERS • MILLERS • MANUFACTURERS

135 William Street New York, N. Y.

HOPKINS' TESTED CRUDE BOTANICALS

Senna — all kinds
Ergot high test
Benzoin se'ect
Rhubarb USP
Cudbear NF
Fennel Seed all kinds
Ipecac Root — high test
Kola Nuts NF
Licorice all kinds
Gum Olibanum all kinds
Orris Root all grades
Psyllium Seed all grades
Quince Seed select
Tamarinds
Senna Pods

Ask for Quotations

MYSORE GOVERNMENT Sandalwood -- Oil --

Distilled from
Santalum Album

INSIST ON ORIGINAL CANS AND CASES

Agents for the United States and Canada

W. J. BUSH & CO.

(Incorporated)
Essential Oils
New York

Chicago National City, Calif. Montreal

HUISKING

CAMPHOR -- MENTHOL

COD LIVER OIL

PEDER DEVOLD BRAND
(Trade Mark Registered)

Highest Grade Medicinal
Practically free of odor and taste.
Richest in Natural Vitamins

Acid Citric
Alkaloids
Bay Rum
Charcoal, "Ellis" Willow
Cinchona Bark
Thick Quills
Cocoa Butter, U. S P.
Gelatine "Pure Food"
Haarlem Oil--
"Klaas Tilly"
Kamala
Lithol
Manna
Mannite
Psyllium Seed
Quicksilver, Virgin
Quinine Bisulfate
and Sulfate
Saffron, American
Spanish
Sal Ammoniac, Lump
Santonine, U. S. P.
Sulfur, Precip. U. S. P.
Thymol
Witch Hazel
Zinc Oxide, Hubbuck's

CHAS. L. HUISKING & CO., Inc.

155 Varick Street New York City

Reciprocal Advertising

Reciprocal Advertising, Inc., New York, is now working out a plan whereby non-competitive nationally advertised products, having affinity for each other, will bear advertisements for each other on their respective cans, bottles, packages, etc.

Pebeco Only on Radio

Pebeco Toothpaste has gone 100 per cent. radio for 1932. Lehn & Fink, Inc., owners of Pebeco, have dropped all other mediums for Hind's Honey and Almond Cream in favor of radio. Lysol Disinfectant remains in magazines. The company said that "what we are doing this year will give us more experience to judge better the relative merits of magazines, newspapers and radio."

New Radio Programs

John H. Woodbury, Inc., "To the Ladies," Friday evenings at 9.45 P. M., CBS.

Lavoris Chemical Co., Minneapolis, "Easy Aces," three times weekly, CBS.

American Dental Association, each Wednesday at 1.00 P. M., CBS.

Account Changes

Carroll Dunham Smith, New York, pharmaceuticals, to Small, Kleppner & Seiffer, Inc., that city.

Collegiate Perfumeries, Inc., St. Paul, cosmetics, to Alan L. Firestone Agency, that city.

Norwich Pharmacal Co., Norwich, N. Y., "Amolin," to Lawrence C. Gumbinner Agency, New York.

Petropalm Corp., New York, shampoos, to Winthrop & Co., that city.

Natural Health Products Assn., New York, "Manam," to Zinn & Myers, Inc., that city.

S-200 Mfg., Kansas City, Mo., cosmetics, to Russell C. Comer Adv. Co., that city.

Dr. G. H. Tichenor Antiseptic Co., New Orleans, pharmaceuticals, to Bauerlein, Inc., that city.

Smith, Kline & French Laboratories, Philadelphia, pharmaceuticals, to John L. Butler Co., that city.

Angela Varona, New York, cosmetics, to George C. Sherman Co., that city.

Ey-Teb, Inc., New York, cosmetics, to Fishler, Farnsworth & Co., that city.

Heck-Conard Co., Kansas City, Mo., deodorant, to Russell C. Comer Adv. Co., that city.

Capudine Chemical Co., Raleigh, N. C., drugs, to Dillard Jacobs Agency, Atlanta.

Angier Chemical Co., Boston, emulsion, to Lewis-Waetjen Agency, Inc., New York.

Bonkura Products Co., Battle Creek, Mich., cosmetics, and Phoenix Preparations, Inc., Scranton, Pa., feminine hygiene products, to Mortimer Lowell Co., New York.

Henry Tetlow Co., Philadelphia, cosmetics, to John L. Butler Co., that city.

Phila. College Birthday

Philadelphia College of Pharmacy observed February 23, the 111th anniversary of its founding in 1821. The occasion was also marked by the presentation to the college by H. K. Mulford, 1887, founder of the H. K. Mulford Co., Philadelphia, of the fifth in the series of murals depicting the progress of pharmacy which are hung in the foyer of the college.

Flavoring Extract Convention

Flavoring Extract Manufacturers' Association will hold its annual convention at the Madison Hotel, Atlantic City, June 12 to 15.

Marmola Blocks F. T. C.

United States Circuit Court of Appeals for the Sixth Circuit, in Cincinnati, has denied the Federal Trade Commission motion for a reopening of its case against the Raladam Company, Detroit, (the "Marmola Case") for the taking of evidence which the Supreme Court of the United States held to be lacking.

Antiseptic Only Indicates Quality

Any product which has the power to inhibit the spread of putrefaction or increase of bacteria may be referred to as "antiseptic," Federal Judge Chestnut of the United States District Court for the District of Maryland has ruled in upholding an exception taken by the F. E. Rollins Co., Boston, to a libel brought against its product "B. & M." by the Food and Drug Administration.

The Government claimed in one libel that the product is adulterated, since it is described as an antiseptic although not actually an antiseptic. This charge the government attempted to sustain by the food and drugs act in which it is stated that an article is misbranded if its strength is not equal to the standards or quality professed. The judge ruled that the word "antiseptic" is not intended to impress with the idea of strength. He also declared that it is not a synonym for "germicide." The Court's finding on this point reads in part as follows:

"The word 'antiseptic' does not of itself convey the idea of any particular strength or degree. The primary meaning of 'antiseptic' is 'tending to prevent putrefaction or decay'." "It is said that the word was in common use long before the bacteriological discoveries of Pasteur and Koch. The word is not equivalent in meaning to the word 'germicide'; that is to say, an antiseptic substance is not necessarily one that kills germs. It is probably true that the most common use of the word 'antiseptic' is in relation to antiseptic surgery, but the term is in its dictionary meaning, and I understand also in its scientific meaning, much broader than its special application to antiseptic surgery.

"And, as I understand it, the word does not import or imply or 'profess' any particular standard of strength or quality with respect to germs or bacteria. Different antiseptic substances vary in the degree of their strength or effectiveness in killing or tending to prevent the formation of bacteria, and probably vary also with the condition and duration of application. Therefore, to say that a substance is 'antiseptic' is merely to affirm that it has a *tendency* to prevent putrefaction, decay, or the development or increase of bacteria; and not to affirm any particular potency in connection therewith. . . .

"The claim that the drug is 'antiseptic' is a profession of *quality* rather than of *strength or purity*."

The court also refused to sustain the charge that false and misleading statements are contained in the booklet which accompanies B. & M. The third libel, charging false and fradulent claims in the literature accompanying the package, the Judge upheld and ordered to trial.

Obituaries

Ralph L. Fuller

Ralph L. Fuller, president, Ralph L. Fuller Associates, and former vice-president, Harshaw, Fuller & Goodwin Co., now the Harshaw Chemical Co., Cleveland, died at his home in Euclid, Ohio, February 17, aged 66. He was well known in the drug and chemical trade and served as vice-president of Harshaw, Fuller & Goodwin for many years. When this firm became Harshaw Chemical Co. he organized the Ralph L. Fuller Associates. Although he was president of the latter company at his death he had not been active for the past two years because of poor health, the business being conducted by his associates Carl W. Fuller and Davis Hawley, who will conduct the business as before his death.

Samuel S. Pease

Samuel S. Pease, who had been identified with the wholesale and retail drug business for the past forty-seven years, died at his home in Springfield, Mass., February 7, aged 62. He had been associated with Brewer & Co., Springfield, since 1885, became a partner in the firm in 1895 and treasurer of the company in 1906.

Antoine L. P. Stiefel

Antoine L. P. Stiefel, wife of Carl F. S. Stiefel, former president of Schering & Glatz, Inc., New York, pharmaceuticals, died February 25 at her home in South Orange, N. J.

Frank Hayden

Frank Hayden, director of sales, Becton, Dickinson & Co., Rutherford, N. J., died at his home in that city at the age of 62. He had been associated with that company for twenty years.

Charles F. Hoffman

Charles F. Hoffman, Schieffelin salesman and veteran with fifty years of service in the drug industry, died March 4th, 1932 after a brief illness, at the age of 73. After a brief period with Lehn & Fink, he was employed by Lazell, Marsh & Gardner as an order pricer until this firm liquidated in 1890. He then became a salesman for Bruen, Ritchey & Co. covering Long Island and New Jersey and, upon the

Announcement

After March 1, 1932 the Schering Corporation will devote itself solely to the sale of biological and medicinal specialties.

Industrial and pharmaceutical chemicals manufactured by Schering-Kahlbaum A. G., Berlin, Germany, which include----

CAMPHOR, SYNTHETIC
MENTHOL SYNTHETIC
THYMOL, U. S. P.

UREA C. P. and Technical
TERPIN HYDRATE U. S. P.
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BORAX
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A. Daigger & Co.,
Chicago, Ill.
Detroit Soda Products Co.,
Wyandotte, Mich.
Arnold, Hoffman & Co.,
Providence, R. I. Philadelphia, Pa.
Thompson Hayward Chemical Company,
Kansas City, Mo. St. Louis, Mo.
Marble Nye Co.,
Boston, Mass. Worcester, Mass.
Innis, Speiden & Co., New York, N. Y.

In Canada
St. Lawrence Trading Company, Ltd.
Montreal, Toronto and Vancouver

American Potash & Chem. Corp.
WOOLWORTH BUILDING NEW YORK CITY

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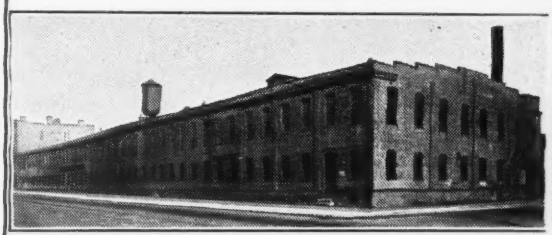
CRUDE BOTANICAL DRUGS



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We are exporters, importers and millers of foreign and American Crude Botanical Drugs.

Our stocks of whole or ground drugs—over 780—are the largest and most complete in this country.

Our control laboratory has a staff of skilled Pharmacognosists, Biologists, Analytical Chemists and Microscopists.

Connections in all foreign countries and sales offices in principal cities.

S. B. PENICK & COMPANY
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absorption of this company by Schieffelin & Co. in 1917, continued to hold the same position with the latter concern until his death.

C. V. Smith

C. V. Smith, chemist at the Elizabeth, N. J., factory of van Ameringen-Haebler, Inc., New York, died suddenly of heart failure at his home, March 7, at the age of 32. A wife and baby survive him.

Frederick H. Erbacher

Frederick H. Erbacher, first vice-president of the old Roeber & Kuebler Co., wholesale druggist, Newark, N. J., died March 1 at his home in that city.

John B. Kempton

John B. Kempton, broker in drugs, Boston, died in Cambridge, Mass., February 25, aged 74.

Mrs. Frederic C. Penfield

Mrs. Frederic Courtland Penfield, formerly Anne Weightman, daughter of the late William Weightman, died at her home in New York, January 26, aged 87.

Financial

Industry's Stock at New Low

Prices of common stocks of drugs and cosmetics companies dropped to a new low for the year in the week ended February 10, according to the stock price indexes of the Standard Statistics Co., New York, but registered a substantial advance over the remainder of the month. A similar trend was shown in the prices of 351 miscellaneous industrials. Detailed figures covering both indexes are given below:

		Drugs and Cosmetics	*351 Industrials*
	Feb. 3	85.7	52.6
	10	80.6	49.2
	17	86.2	55.1
	24	85.0	54.7
	Mar. 2	86.2	56.4
1932	High	88.3	56.7
	Low	80.6	49.2
1931	High	133.8	114.7
	Low	82.4	51.4

American Solvents Plan

The following reorganization plan for the American Solvents and Chemical Corp. has been adopted. New cash totaling about $1,650,000 will be realized through sale of certain idle properties, and $731,500 more will be realized by offering of 133,000 shares of common stock in the new company.

The capitalization of the new company is to be $3,990,000 par value of preference stock and 207,412 shares of common stock. There will be no funded debt. If the plan is carried out promptly, the committee estimates the net income from 1932 should be about $750,000, or 2.7 times dividend requirements, and, after preferred dividends, equivalent to about $2.27 a share on the new common.

Each $1,000 debenture is to be exchanged for $600 par value of the new preferred stock and ten shares of the new common stock, plus a cash payment equivalent to 60 per cent. of the accrued interest on the debentures through Dec. 31, 1931. Holders of each $1,000 debenture get the right to subscribe for twenty shares of new common stock at $5.50 a share. The rights to present preference and common stockholders are also at $5.50 a share, but apply only to such shares as are not subscribed by the debenture holders.

The reorganization committee consists of Joseph P. Ripley, chairman; C. O. Cornell, Milton C. Cross, Frederico Lage, Arthur W. Loasby, John Nickerson, H. I. Peffer, Davenport Pogue, I. J. Seskis and Leslie L. Vivian. Nelson Stuart, 22 William Street, is secretary. The City Bank Farmers Trust Company is depository.

This followed the filing of a petition in bankruptcy listing the following: liabilities $13,585,904; assets $7,993,212, main items being real estate, plants and equipment, $4,320,000; accounts receivable, mainly from subsidiary companies, $3,000,000 (approximate). Principal creditors listed are National City Bank and Stewart C. Pratt as trustees under two bond issues, $5,090,000, secured; Chase National Bank as trustee under bond issue, $1,560,000, secured. The petition also lists contingent liabilities of $1,104,423 on notes of the Rossville Commercial Alcohol Co., a subsidiary, which were discounted by local banks, and states that the company is contingently liable on surety company bonds amounting to about $4,000,000 given to the government to insure the performance of contracts.

Earnings and Dividends

AMERICAN HOME PRODUCTS

American Home Products year ended Dec. 31: Net profits after depreciation, taxes and foreign exchange adjustments, substantially $500,000, the minor portion of which occurred in the last half of the year. The net compared with a net of $21,123,430, or $6.03 a share, in 1930.

The consolidated balance sheet as of December 31, 1931, showed current assets of $61,084,687, including $16,085,311 cash and $10,132,520 marketable securities. Current liabilities amounted to $9,732,717, leaving an indicated net working capital of $51,351,970, which compared with an indicated net working capital of $47,842,526 in 1930 based on current assets of $60,358,553, including $16,922,392 cash and $6,651,472 marketable securities, and current liabilities of $12,516,027. Earned surplus at the end of 1931 was $24,974,782 as against $19,547,541 at the end of 1930. Total assets were $173,408,896, compared with $171,159,085 in 1930.

ABBOTT LABORATORIES

Abbott Laboratories year ended Dec. 31: Net profit, $408,461, or $2.81 a share on 145,000 shares of stock, against $405,388, or $2.79, in 1930. Company also declared regular quarterly dividend of 62½ cents per share, payable April 1, to stockholders of record March 18.

AFFILIATED PRODUCTS, INC.

Affiliated Products, Inc., year ended Dec. 31: Net profit after interest, depreciation and Federal taxes, $1,010,088, equivalent, after minority interest, to $2.63 a share in 382,800 capital shares, against $771,404 or $2.01 a share in 1930.

ARMSTRONG CORK CO.

Armstrong Cork Co. year ended Dec. 31: Net loss after interest, depreciation, inventory adjustments and other charges, $3,823,431, against net loss of 3,364,413 in 1930. Report for 1931 includes $818,373 losses of foreign subsidiaries, while report for 1930 excluded such losses.

ANCHOR CAP CORP.

Anchor Cap Corp year ended Dec. 31: Net income after Federal taxes, depreciation and amortization, $763,164, equivalent after preferred dividends to $2.44 a share on 227,758 common shares, compared with $1,019,350, or $3.57 a share, on common in 1930.

CHESEBROUGH MFG. CO.

Chesebrough Mfg. Co. has declared an extra dividend of 50 cents per share and the usual quarterly dividend of $1 per share on the $3,000,000 common stock, par $25, both payable Mar. 31 to holders of record Mar. 10. In March, June and September 1929, 1930 and 1931 an extra dividend of 50 cents per share was also paid, as compared with an extra of $1 per share on Dec. 30 1929, 1930 and 1931. Extras of 25 cents per share were distributed on June 30, Sept. 29 and Dec. 28, 1928.

COLGATE-PALMOLIVE-PEET CO.

Colgate-Palmolive-Peet Co., year ended Dec. 31: Net profit, $7,598,223, equivalent, after preferred dividends, to $3.12 a share on 1,999,970 common shares, against $8,550,056, or $3.76 a share, in 1930. Charge of $943,155 was made against surplus to cover cost of converting net working capital of foreign subsidiaries into dollars.

COMMERCIAL SOLVENTS

Commercial Solvents Corp. has declared a quarterly dividend of 15 cents per share on the common stock, payable March 31 to holders of record March 5. This compares with quarterly cash dividends of 25 cents per share paid from Jan. 1, 1930 to and incl. Dec. 31, 1931.

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ALUMINUM CHLORIDE ANHYDROUS

HIGHER YIELDS, PURER PRODUCTS and CONSISTENT RESULTS are made possible by the use of this exceptional catalyst in the formation of ketones and other synthetic reactions.

Average analysis indicates 99.5 per cent anhydrous aluminum chloride, less than 0.05 per cent iron, and other metals entirely absent or negligible. It is nearly white in color, has a uniformly high catalytic activity, and is available in graded sizes, including lumps, granules or powder, thus meeting specifically a wide range of requirements. Prompt shipment can be made in 100-pound or 600-pound drums, in quantities up to carloads.

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CROWN CORK & SEAL

Crown Cork & Seal Co., Inc., has declared a quarterly dividend of 30 cents per share has been declared on the common stock, no par value, payable March 18 to holders of record Feb. 29. This compares with quarterly distributions of 60 cents per share made from Sept. 18, 1930 to incl. Dec. 18, 1931. In addition, a special stock dividend of 10% was paid on Oct. 14, 1930.

DRUG, INC.

For the year ended December 31, 1931, Drug, Inc. has reported a net profit of $19,440,456, after charges, depreciation, interest and Federal taxes. This was equal to $5.55 a share on 3,501,499 shares outstanding at the end of the year. The figures included earnings of wholly owned foreign subsidiaries and the income from partly owned foreign subsidiaries or investments at depreciated value of exchange. Earnings, the report stated, were affected in this way to the extent of $3,374,910, equivalent to $5.52 a share on 611,000 common stock, comparing with $3,356,719, or $5.49 a share in 1930. Sales were $16,491,742 in 1931, against $14,-918,115 in 1930. Balance sheet shows current assets of $6,345,294 and current liabilities of $2,818,888, leaving net working capital of $3,526,406, compared with $4,131,437 a year before.

The company has continued its policy of purchasing desirable businesses of proven earning power, and during the year acquired the formulas and trade-rights to Saltrates Incorporated, manufacturer of proprietaries, and the business of John Wyeth and Brothers, Inc., Philadelphia, the first pharmaceutical manufacturer established in the country.

The company has constructed a new plant in Chicago, known as "The Petrolagar Medical Center," and embracing 100,000 square feet of floor space, or sufficient to house all of the company's Chicago manufacturing operations. Installation of a modern laboratory and manufacturing machinery has been practically completed and several units began manufacturing before the close of the year.

EMERSON'S BROMO-SELTZER

Emerson's Bromo-Seltzer, Inc., holding company for the Emerson Drug Co. and the Maryland Glass Co., reported a net income of $2,069,875 for the year ended December 31, 1931, equivalent, after preferred dividends, to $2.77 a share on the combined class A and class B common stocks. This compared with $2,054,168, representing an increase of $5,707. Investments in subsidiary companies were carried at $25,024,470, represented chiefly by stock of the Emerson Drug Co. and the Maryland Glass Co. Income was for the most part dividends received from these two corporations.

KATZ DRUG CO.

Year ended Dec. 31: Net profit after charges and taxes, $474,646, equivalent after dividends paid on 6½ per cent. preferred stock to $3.78 a share on 101,133 shares of common stock, against $375,431, or $2.74 a share on 102,483 common shares, in previous year. Net sales totaled $7,511,513, compared with $6,688,892 in 1930.

KIMBERLY-CLARK

Kimberly-Clark Corp. has declared a quarterly dividend of 31¼ cents per share on the no par value common stock, payable April 1 to holders of record March 12. This compares with quarterly distributions of 62½ cents per share made on this issue from Oct. 1, 1928 to and incl. Jan. 1, 1932. The preliminary statement for the year ended Dec. 31, 1931, subject to final audit, shows surplus for the year available for common dividends of $1,164,534 after depreciation, depletion, interest, Federal taxes, preferred dividends and after inventory adjustments, equal to $2.33 a share on 99,800 shares of common stock, against $2,493,271, or $4.98 a common share in 1930.

LAMBERT CO.

Lambert Co., St. Louis, reported a net profit of $6,142,129 for the year ended December 31, 1931, after depreciation, Federal taxes, and minority interest, and after deducting $98,798 for adjustments of earnings of foreign branches and agencies to a basis of exchange rates at the end of the year. The net was equal to $8.20 a share on 748,996 shares of no-par capital stock and compared with a net of $7,132,412, or $9.52 a share, in 1930.

The consolidated balance sheet as of December 31, 1931, showed current assets of $7,745,570 and current liabilities of $1,536,145, comparing with $7,513,183 and $1,571,352, respectively, on December 31, 1930. Cash amounted to $5,492,120 after deduction of the dividend payable January 2, comparing with $5,472,612 on the same basis in previous year.

LEHN & FINK

Lehn & Fink Products Co. reports for the year ended December 31, 1931, net profit of $1,451,163 after depreciation, Federal taxes and after deducting $72,022 for foreign exchange loss and provision for decrease in equity in investments in controlled foreign affiliated companies. The net was equal to $3.46 a share on 419,166 shares of no-par capital stock and it compared with a net profit of $1,706,771, or $4.07 a share, for the year 1930.

The consolidated balance sheet of the company and subsidiaries as of December 31, 1931, showed current assets of $1,654,-285 and current liabilities of $322,431, leaving an indicated net working capital of $1,331,854, comparing with current assets of $2,207,620, current liabilities of $838,310, and an indicated net working capital of $1,369,310 at the end of 1930. The report showed a surplus of $29?,916 after dividends and minority interest, comparing with a surplus of $448,281 in 1930.

MCKESSON & ROBBINS

McKesson & Robbins year ended Dec. 31, preliminary report: Net income after depreciation, interest and Federal taxes, $1,757,822, equivalent, after preferred dividends, to 24 cents a share on 1,074,734 common shares, against $2,629,196 or 96 cents a share on 1,074,721 common shares in 1930.

MEAD, JOHNSON & CO.

Mead, Johnson & Co., year ended Dec. 31: Net profit, after charges and Federal taxes $1,382,351, equivalent, after preferred dividends, to $7.66 a share on 165,000 common shares, compared with $1,687,634, or $9.51 a share in 1930.

The directors have declared an extra dividend of 25 cents per share and the regular quarterly of 75 cents per share on the common stock, both payable April 1 to holders of record Mar. 15. A similar extra was paid three months ago.

J. W. Johnson and H. D. Johnson have been elected directors succeeding Harry W. Kinney and George N. Buffington, both resigned.

MONSANTO CHEMICAL WKS.

Monsanto Chemical Works, St. Louis, has reported consolidated net profits for 1931, after all charges and taxes, of $1,280,-783, or $2.98 per share on the no par capital stock compared with $732,684, or $1.70 per share for the year 1930. Gross profit for 1931 was $4,286,362, compared with $3,677,771, an increase of $608,591.

The consolidated balance sheet as of December 31, 1931, shows total current assets of $5,895,505 and current liabilities of $1,031,727. Earned surplus increased $511,211, representing profits in excess of $535,273 dividends paid and $234,298, the amount of the depreciation in dollar value of the net current assets of the British subsidiary, due to the drop in the pound sterling. Net worth increased $1,229,484, the book value of outstanding shares increasing from $29.60 a share to $32.46 a share.

NORTHAM WARREN CORP.

Northam Warren Corp. year ended Dec. 31: Net profit after interest, depreciation and Federal taxes, $816,708, equivalent, after preference dividend requirements, to $3.46 a share on 200,000 common shares, against $807,014, or $3.47 a share on 192,500 shares, in 1930.

PARKE, DAVIS

Parke, Davis & Co. has declared a special dividend of 10 cents per share and the regular quarterly dividend of 25 cents per share, both payable March 31 to holders of record March 19. Similar dividends were paid six, nine and twelve months ago. On Jan. 2 last a special distribution of 20 cents was made.

Drug Markets

Review of conditions affecting markets and prices of chemicals, aromatics, essential oils, flavors, crude drugs and other raw materials, together with an alphabetical list of market prices.

Section also contains condensed review of patents and abstracts of particular interest to the chemist and those in charge of technical control.

Psyllium Seed Plentiful

Large distributors of psyllium seed seem to be well supplied with merchandise and, as lower shipment prices continue to be reported, this has tended to create an easier undertone to the market here and to offset any idea of a higher spot market.

French seed continued to command interest with a satisfactory demand reported at prices that, however, were subject to some shading from the generally quoted schedule of from 22c to 25c per pound as to quality.

It is said that stocks in France at the present time is rather heavy and that they are not likely to move this supply between now and the arrival of the new crop so that their carryover is likely to be heavy.

It is reported that good clean German brown seed was not over plentiful and that sales were reported at from 7c to 7½c per pound to anyone specifying this grade of material.

Imports of Plantago psyllium seed and related species into the United States during 1931 aggregated approximately 4,850,500 pounds valued at $690,000. Of the above quantity, France furnished 2,738,500 pounds, British India 1,685,000, Germany 232,700, Spain 85,000, Italy 40,300, and other countries 69,000.

Assistant Trade Commissioner Paul L. Hopper, Calcutta, reports that there are about 50 species of the Plantago genus of botanicals growing in India but Plantago psyllium, the most widely known in the United States, is found in but sparing quantities, its trade being negligible. However, the growth and commerce, in Plantago ovata, blonde seed, and Plantago major, in India are extensive.

A limited cultivation of these seeds has been reported but yields of the wild plants predominate. Aside from the Plantago group in India are species of Ocimum and the Lallemantia royleana seed, all of relatively high mucilaginous content. Apparently the principal use of mucilaginous seeds in India for catarrh and other disorders, is in the form of a paste, formed by boiling, in contrast to the method of consumption in the United States in which the seeds in their natural state are taken internally as a laxative.

Calcium Gluconate Up Sharply

Calcium gluconate has taken a sharp upward trend in price with leading producers advancing their quotations 15c per pound to the basis of 45c per pound for granulated in barrels. Powdered calcium gluconate is quoted at 47c per pound in barrels. The only reason offered by manufacturers for the advance is that the old price was too low.

Bismuth Salt Prices

The decline in the various bismuth preparations that took place on January 18 has been followed by marking down those items that were not reduced at that time. The lower cost of production has made it possible to issue the following schedule:

Bismuth Am. Citrate	$3.10	per pound
Citrate USP	2.45	" "
Chloride	2.35	" "
Hydroxide	2.65	" "
Oxide anhydrous	3.05	" "
Tannate	2.15	" "

Camphor Steadier

Camphor, after the recent decline, seemed to be fairly steady. Stocks seemed ample for current needs but their was no further tendency to cut prices as it was felt in most quarters that when cost of replacement was considered the market was at levels that would be called low and favorable to buyers.

The schedule of prices for slabs in cases is from 47c to 48c per pound; tablets are selling for from 57c to 59c per pound; powdered in barrels from 48c to 49c. Monobromated is generally firm at from $1.60 to $1.65 per pound.

Citric Quiet But Firm

Citric acid is quiet with no special feature in the market other than that a number of inquiries are coming into the market for later delivery. The Spring season is approaching and with it the usual heavy demand is expected, especially so as prices are now attractively low and there is little prospect of higher prices during the coming season.

Mercury Firmer

The stronger undertone that was displayed in the mercury market a month or more ago, when it became generally known that the very low prevailing prices had greatly curtailed production, has now definitely crystallized into a much firmer position for this commodity. The spot market is up approximately $3 per flask with quotations generally ranging from $70 to $71 per flask with prices very firm at the new level.

The upward tendency in the market is not at all surprising in view of the fact that production in the primary market is at a very low level. It is stated that approximately 90 per cent. of the producers in the far west have suspended operations. Due to this condition stocks on the Pacific Coast are small with new arrivals in San Francisco having dropped to a very low point. The mines are said to be refusing all offers for March delivery because of the shortage.

Although this condition has tended to create more consumer interest with the result that inquiries are more numerous, demand is said to be not much better than of a routine nature.

Some quarters are of the opinion that the strength displayed is but temporary. These factors look for a higher market during the next six weeks, during which time prices will reach a level at which it will again become profitable for the small mines to resume production. These small mines can start operations practically over night. It is generally felt, therefore, that with demand such as it is the increment in supplies will immediately have a stabilizing effect on the present conditions and prices will again become easier.

Seidlitz Mixture Steady

Seidlitz mixture was held firm on the basis of from 13c to 13½c per pound. The recent decline in tartaric acid has not as yet been passed along to this item as is customary. This item usually fluctuates in direct sympathy with changes in the price of the raw material but reports of moderate competition has kept the market comparatively steady at all times.

Alcohol Unchanged

The denatured alcohol market is reported as being of a routine nature with shipments going forward mostly against existing contracts. The principal consuming season is drawing to a close and the demand therefore, has been toward an equally steady decrease. Anti-freeze jobbers were well stocked so that it was previously reported this trade had been resorting to price cutting. The recent cold snap throughout the greater part of the country, however, has resulted in a firmer attitude being taken by resellers in that they have found it possible to move a great part of the stocks which they were afraid they would have to carry into another season. This is said to have relieved one of the weak spots in the market so that the general price situation throughout the entire trade is now firm.

A new alcohol schedule is expected to be announced shortly as the present schedule expires March 31. Leading distillers have adhered closely to the present schedule and it is generally felt that, although present consuming demand does not indicate a possibility of higher prices, the situation is such that the new schedule will be approximately the same as that now in force.

Cinchona in South America

The Department of Commerce reports that the continued commercial exploitation of cinchona bark in South America is evidenced in export returns of Boliva, indicating shipments of that product, locally termed "quina," amounting to 189,200 kilos in 1930. This compared favorably with exports of 137,600 kilos in 1929. Of the latter amount the United States purchased 7,600 kilos, the United Kingdom 103,700 kilos, and Germany 26,300 kilos.

The spot market on gum tragacanth was subject to another sharp reduction during the past month, placing this commodity at levels that appear favorable for buyers. Number one gum is now offered at from 95c to $1.05 per pound; No. 2 at 80c to 85c; No. 3 at 60c to 70c and Turkish gum at from 45c to 75c per pound.

Consumers, however, have been entering the market only in a small way, preferring to buy often, rather than in quantity. The narrow consuming market has tended to increase the competitive factor.

Assistant Commercial Attache John T. Harding, Istanbul reports that gum tragacanth enjoyed but a limited demand toward the end of 1931. Stocks on hand about the end of December totaled 867 sacks, about half of which had been produced in 1931, and the remainder during 1928-30.

Gum tragacanth imports increased in both quantity and value from 1,003,000 pounds ($443,000) in 1930, to 1,673,300 pounds, ($673,000) in 1931.

Arabic Gum Strengthens

The recent rise in sterling has had a strengthening influence upon gum arabic in the primary market but the quiet demand on spot has kept the market here easy and competitive. Amber sorts remain unchanged at the low levels recently reached of from 7c to 7½c per pound with reports that some dealers are offering gum at as low as 6½c per pound in sizable quantities. The better grades of white gum are easier with number one being quoted at from 15c to 16c per pound and seconds at from 13c to 14c per pound. This represents prices that should prove very attractive to buyers.

A recent Department of Commerce report states that while approximately 16,825 tons of gum arabic valued at $4,293,600 were exported from Egypt during the first nine months of 1930, there were but 16,433 tons valued at $2,500,200 during the corresponding period of 1931. Exports to the United States declined from 3,048 tons to 2,783 tons.

Yields of gum arabic in Egypt during the first nine months of 1931 were substantial, judging by arrivals in the Provinces of Kordofan, White Nile, and Upper Nile, which totaled 422,581 cantars, as compared with 299,188 cantars in the corresponding period of 1930.

Imports of gum arabic gained from about 6,954,000 pounds in 1930, to 7,264,000 pounds in 1931, declining in aggregate value from $972,600 to $535,600, respectively.

Agar Weakens

Agar agar prices have again weakened owing principally to the low quotations prevailing on goods for shipment from the primary market. Stocks here are also thought to be above requirements, so that the severity of competition has tended to lower spot prices.

Number one agar in bale lots is selling at from 82c to 84c per pound, with the number two grade being freely offered at from 75c to 77c per pound.

Imports of agar agar into the United States during 1931 were about 16 per cent. greater in quantity and four per cent. in value than the average imports during the five-year period 1926-1930. Purchases totaled approximately 501,300 pounds valued at $325,000 last year as compared with 398,600 pounds worth $305,600 in 1930, and the five-year average of 431,800 pounds ($313,000).

Tartaric Priced Lower

Domestic makers of tartaric acid have again reduced prices 1c per pound, bringing the market below the level of the imported material. Single barrels are now available at 24½c per pound, while in kegs 25c per pound is being asked.

Cod Liver Oil Quiet

The cod liver oil market is quiet reflecting the drawing to a close of the large consuming season. There is a fair demand for prompt shipment but consumers are reluctant to extend purchases at this time. An increase in competition has been noticed with some brands selling down to $21 per barrel but from $23 to $24 is usually obtained for the better known brands.

Cable advices from the primary market indicate an easier tendency there due principally to the fact that production is now under way in Norway and the early indications point to a satisfactory production for the season. Yield of oil from the livers is running considerably above that for the corresponding time last year, in fact it is said that the yield is 10 per cent. higher this year running in the neighborhood of 55 or 60 per cent. as compared to 50 to 55 per cent. in 1931.

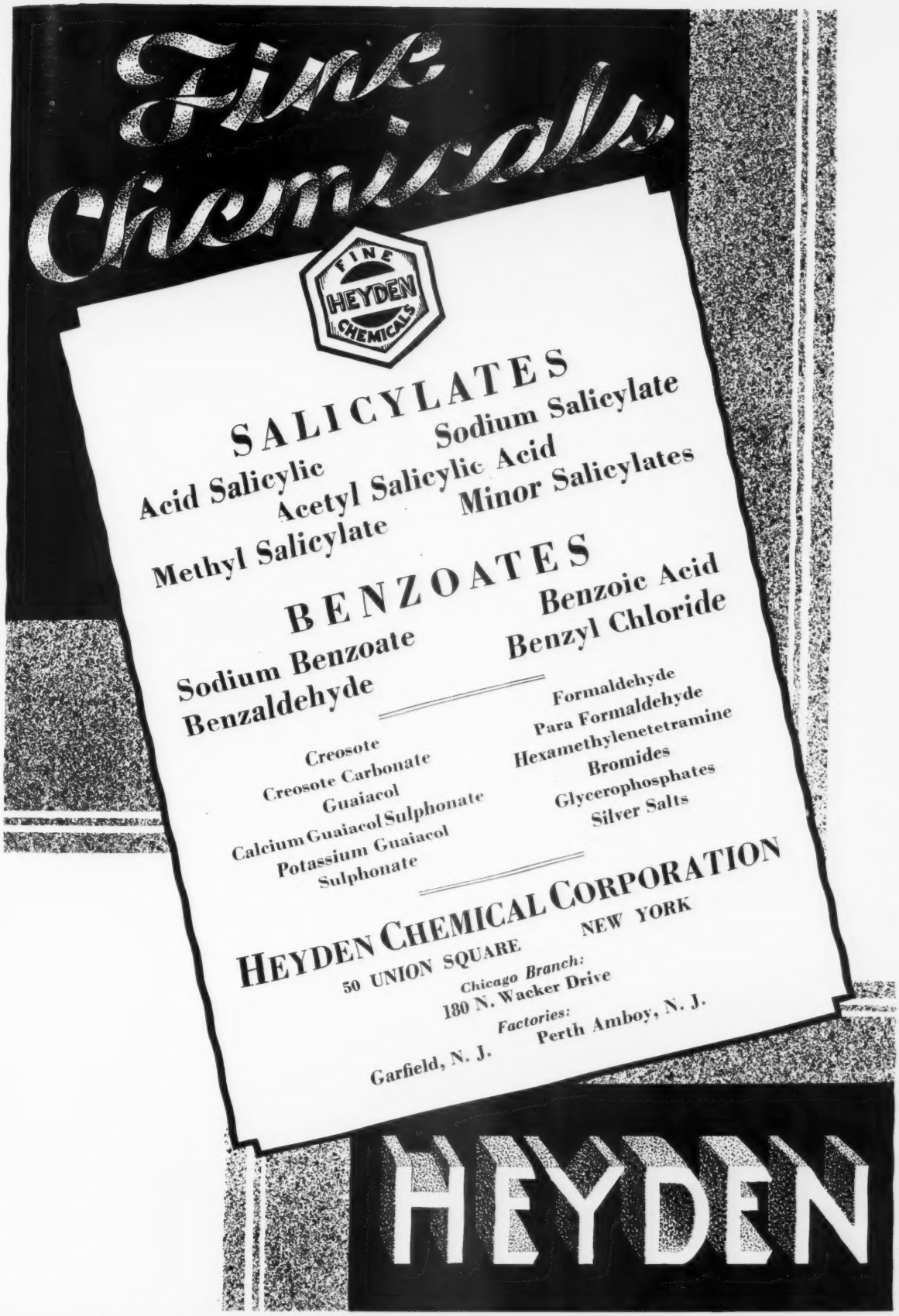
Glycerin fails to present any outstanding developments. Although crude is soft the refined grades are meeting with a fair inquiry and prices are being maintained at the 11¼c per pound level.

During 1930 there was imported into the United States 3,177,479 pounds of refined glycerin valued at $272,494 as compared with 1,975,970 pounds valued at $141,595 in 1931. Production of chemically pure glycerin in the United States totaled 69,654,223 pounds in 1930 compared to 70,527,961 pounds during 1931. Stocks of chemically pure glycerin in the United States on December 31, 1930 totaled 6,829,504 as compared to 11,177,720 pounds on hand as of December 31, 1931.

Chamomiles Easier

Chamomile flowers remain without new feature with the exception that a slightly easier tendency has developed on spot. It is said that some quarters are inclined to shade the existing schedule of from 14c to 16c per pound in order to get orders when in the market on a firm basis. Stocks in the primary market and on spot are not heavy, however, but the lack of any large consumer demand has created the somewhat soft tendency.

The Department of Commerce reports that Chamomile flowers are native to Europe and grow wild in all temperate parts of that continent. Also, it is cultivated in Europe and in the United States to a limited extent. It is used medicinally as an aromatic bitter. The United States increased its purchases of chamomile last year, imports having gained from about 165,400 pounds valued at $19,000 in 1930 to 176,700 pounds valued at $19,800 in 1931. Hungary was the principal source in 1931, furnishing 117,200 pounds followed by Germany 26,000 pounds, Russia 16,800 pounds, and Belgium 16,600 pounds.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Ipecac Stronger

A gain in demand for Ipecac root has created a firmer undertone in this commodity. Prices, which had been weak for some time, show a tendency toward stability. Carteagna root is still being offered at from 90c to 95c per pound, with powdered root selling at from $1.00 to $1.10 per pound.

Consul General C. R. Cameron, Sao Paulo writes that Cuyaba, Brazil, is considered a principal world source and collection center of ipecac. The superior grade of ipecac, which is black, grows on the slopes of the Parecis Mountains, northwest of Cuyaba, between the headwaters of the Guapore and Paraguay Rivers. The exporting firms of Cuyabai advance funds to foremen who organize gatherers for harvesting during the dry season from August to December. Imports of ipecac into the United States totaled about 57,000 pounds worth $66,000 in 1931, as compared with 46,500 pounds valued at $108,000 in 1930.

Carnauba Wax Firm

Carnauba wax is reported to be meeting with an improved inquiry at firm prices, namely from 22c to 24c per pound for No. 1. These prices are considered to be low when replacement costs are considered and it is said that a further improvement in activity may result in higher prices.

Total carnauba wax imports for 1930 amounted to 7,415,600 pounds valued at $1,435,400. The 1931 imports show an increase in volume but a decline in value, reflecting the generally lower commodity values. During 1931 imports totaled 7,447,100 pounds worth $1,070,300.

It is estimated that the Brazilian output of carnauba wax during 1931 was above the average in quantity and quality and that exports exceeded 3,000 tons.

Iodine Products Down

As a result of the decline of crude material, leading makers of iodine preparations have announced a drastic reduction in prices. Potassium iodide is now available at $2.90 per pound, compared with a previous price of $3.25 per pound. Sodium iodide has been cut to $3.50; thymol iodide to $5.00 and resublimed iodide to $3.75 per pound.

Mercury red is now priced at $4.13 per pound and the yellow at $4.03 per pound. The market is said to be now fairly steady at the new levels.

Lycopodium Firmer

Lycopodium is firmer at the prevailing market of from 26c to 28c per pound as to quantity. It is said that as most of the distressed lots have been taken out of the market sellers are inclined to hold out for the top price.

Vanilla Quiet

The vanilla bean market appears to be going along in quite a routine manner with no price changes noted. There is a keener desire on the part of importers of Bourbon beans to reduce their stocks in preparation for an early movement of new crop goods.

All indications are that this year's Mexican vanilla crop will be of very good quality, owing to heavy rains during the early part of the growing season, and bright sunshine during the ripening period. There is very little demand for vanilla at present, and the green beans were left on the vines longer than usual, thus improving their quality.

During the month of January, only six cases of vanilla, of a gross weight of 480 kilos, were shipped from Vera Cruz. During the past three months, that is November, December and January, the shipments amounted to only 63 cases of 5,857 kilos gross weight.

The shipments during the year 1931, were 1,520 cases of 142,113 kilos gross weight, as compared with 1,447 cases of 162,141 kilos gross weight in 1930.

Pyrethrum Points Up

Considerable interest is centered upon the market for Japanese Pyrethrum flowers as a result of higher cables from the primary market. Indications point toward an increase in cost, this development coming in spite of the fact that Japanese exchange is more favorable.

The open winter has stimulated the demand and in view of the approach of the heavy consuming season most importers are inclined to take a firmer view of the outlook. As yet no increases have been noted in the spot market but a rising market for this commodity would not come as a surprise. Stocks here are comparatively small when it is considered that the large consuming season is just ahead.

The Department of Commerce reports that imports into the United States during 1931 of pyrethrum flowers of Yugoslav origin increased from 312,500 pounds in 1930 to 337,000 pounds in 1931, declining in value from $51,800 to $40,800, respectively. Purchases from Japan declined more than 50 per cent. in quantity and 65 per cent. in value during this period or from 8,224,000 pounds valued at $1,281,200 in 1930 to 3,871,800 pounds worth $452,800 in 1931.

Contrary to reports that American importers had been buying more pyrethrum from Yugoslavia direct, avoiding the trade through Trieste, official statistics indicate that imports into the United States from Italy increased from 268,000 pounds in 1930 to 365,400 pounds in 1931. Purchases from Yugoslavia declined from 44,500 pounds in 1930 to 1,500 pounds last year.

Menthol Easier

Menthol is without new feature other than the fact that the decline in Japanese exchange has eased the situation somewhat in the primary market. Recent cables received have been based on the reduced value of the Yen but this has not been of sufficient extent to cause any change in the spot position of the item. Quotations here are therefore on the same basis as previously reported, namely from $3.25 per pound in case lots to $3.45 per pound in lesser quantities.

It is generally felt that with settlement of the trouble in the Far East the Yen would increase sharply in value with the natural resumption of the firmer primary position on menthol that has been noticed recently.

Santonine Easier

Santonine is easier, reflecting the lower rate of exchange. The spot market is now on the basis of from $90 to $97 per pound. It is expected that the lower prices will encourage a greater consumption over the coming season.

According to the Quarterly Review, of the U. S. S. R. Chamber of Commerce, exports of santonin from Russia increased steadily from 6,480 kilos in 1927-28 to 8,326 kilos in 1928-29 and 10,630 kilos in 1929-30.

The upward tendency of quicksilver has had the tencency to materially strengthen the undertone of the mercurial group. To a late date, however, leading manufacturers have not changed the official schedule but should the raw material market continue to advance some change in the salts will no doubt be witnessed.

Papain Competitive

Due to the somewhat narrower sales outlet for papain during the past month the competitive factor has entered the market to a greater extent, resulting in lower asking prices by the principal importers. Crude is generally quoted at from $1.85 to $1.90 per pound, with pure powdered selling at from $2.00 to $2.05 per pound.

The Department of Commerce reports that imports of papain into the United States during 1931 totaled 65,275 pounds valued at $121,481 as compared with 1930 purchases amounting to 77,000 pounds worth $173,500. Imports direct from Ceylon in 1930 aggregated about 51,200 pounds ($103,200). The remainder entered from the United Kingdom, there being no available indication of primary source. The papaya tree has been reported to grow in the West Indies and extensively in Hawaii. Over 96,000 trees and a yield of 1,400,000 fruit on that island were reported in 1929. However, American interest in Hawaiian papain has not developed, if import figures are a criterion.

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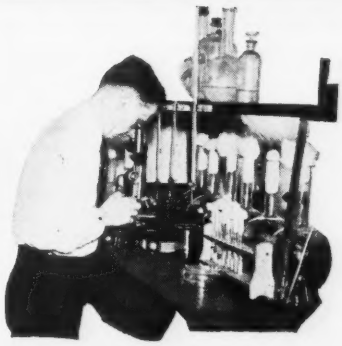

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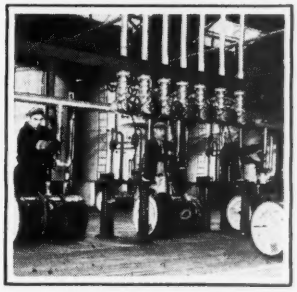

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Boiling Range—About 35°C.

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Cantharides Up Sharply

A sharp advance is the feature of the market for all grades of cantharides. This commodity is very scarce on the spot and difficult to obtain from the primary market.

Recent sales of the Russian variety brought out prices at from $1.25 to $1.30 per pound in cases with the powdered selling at as high as from $1.50 to $1.60 per pound.

The Chinese grades have also advanced sharply, now being offered in a limited way at from 85c to 90c per pound in cases, with the powdered selling at from $1.00 to $1.05 per pound.

Import costs are at a level that created a disinclination on the part of importers to bring in very large quantities to relieve the spot shortage.

Japan Wax Firm

Japan wax continues very firm at from 8½c to 9c per pound as to quantity. Some sellers seem disinclined to sell below 9c per pound as a minimum owing to the fact that some buyers have felt concern as to the possibility of shipments from the primary being interferred with. The primary market has not shown a readiness to make early shipments.

Tolu Balsam Steady

Tolu balsam continues to be very firm on the spot market owing to the extremely small supply here. A light demand has failed to bring out a recent quotation but it is generally reported that 80c per pound would be asked. Some viewed the market as being in a nominal position owing to the absence of normal stocks.

Pink Root Lower

Pink root declined 2c per pound in the spot market last month and is now being freely offered at from 30c to 32c per pound. It is said this has not expanded the sale of this commodity to any appreciable extent. Primary stocks are large and the replacement market favorable.

Senna Pods Down

Senna pods were reduced in the spot market during the past month to the basis of from 8c to 9c per pound. The rest of the list remains unchanged and without new feature other than the reports that the stocks of Tinnevelly are said to have been cut materially and that most dealers look for a revival of importations on a large scale this year.

Gum Mastic Firmer

The market for gum mastic seems to have become somewhat firmer on the basis of the recent decline to the basis of from 38c to 43c per pound. Fairly large quantities are said to have been disposed of at the present levels of quotations.

Senna Imports Less

Imports of senna into the United States in 1931 amounted to 1,265,700 pounds worth $70,300 as compared with 2,343,000 pounds valued at $165,000 in the preceding year.

British India continued to furnish appreciable quantities in 1931, imports from that country having aggregated about 942,000 pounds valued at $47,000. Ceylon was the next most important source, furnishing 149,400 pounds valued at $8,400, followed by Egypt, which was the origin of 120,400 pounds worth $7,400. Smaller quantities entered by way of the United Kingdom, Belgium, and Canada.

More Nux Vomica

The Department of Commerce reports that Nux vomica exports from French Indo-China finds a leading consuming outlet in the United States, the above country having surpassed India in the quantity shipped to the United States last year. Imports of nux vomica into the United States totaled approximately 1,924,600 pounds valued at $58,500 in 1931, as compared with 2,197,500 pounds worth $56,400 during 1930. French Indo-China in 1931 supplied 1,264,400 pounds while 617,800 pounds came from India. Small quantities were recorded as entering from Syria and Canada, presumably transshipments.

Malva Nominal

Blue malva flowers are practically nominal in the spot market due to the almost total absence of any stocks and the impossibility of obtaining further supplies from abroad until such time as a new crop can be gathered. Black flowers are in fair supply at from 25c to 40c per pound as to quality. There is little call for the black flowers.

Poppy Scarce

Poppy flowers continue very scarce on spot with a strong market prevailing. The lack of demand, however, has failed to bring out any recent quotations but it is said that as high as 68c per pound would be asked in event of a firm inquiry. That quotation, however, is practically nominal in the absence of any firm orders.

Rose Petal Down

Rose petals red are 5c per pound lower in the spot market. Quotations now range from 45c to 50c per pound as to quantity and quality. Stocks are now large but seem ample in view of the small request during the month past.

Thymol Competitive

Thymol has been meeting considerable competition with leading sellers marking down their asking prices 10c per pound to the basis of from $1.25 to $1.40 per pound. A fair inquiry is reported in the market at the new level.

Ergot Sales Small

Small sales of Spanish ergot are reported at 54c per pound. Russian is offered more freely but not below 47c per pound, no shading being noted below this price.

Imports of ergot for consumption in the United States during 1931 amounted to 287,000 pounds as compared with 291,300 pounds in 1930 and 228,000 pounds in 1929. Assuming that supplies from Germany represent transhipments of Russian ergot purchases thereof totaled 210,300 pounds in 1931 as against 121,000 in 1930. Imports from Soviet Russia direct totaled 8,700 pounds in 1930 and 106,100 in 1931. Arrivals from Spain amounted to 70,200 pounds in 1931, as compared with 61,300 in the preceding year. Small quantities were recorded from Portugal and Belgium.

Ginseng Exports Up

Exports of ginseng from the United States, destined principally to China, states a Department of Commerce report, gained from approximately 202,800 pounds valued at $1,877,000 in 1930 to 260,500 pounds worth $1,896,000 in 1931. Reports from China indicate a continued large consumption during the past year, fair profits having been realized by local dealers notwithstanding unfavorable exchange. Hong Kong ginseng dealers requested on February 17, 1932, that importers delay deliveries for one month owing to unsettled conditions of the North China market.

Tonka Beans Quiet

Demand for tonka beans is light. With stocks reported to be in firm hands the competitive factor has not entered the market to any extent so that the easier tendency that developed a short time ago is not expected to carry prices to lower levels. The Surinam grade, never selling to any great extent, is quoted at from 70c to 75c per pound.

Cut soap bark is slightly lower in the spot market at from 7c to 8c per pound, other kinds remaining unchanged. Profits are said to be small based on import costs. The demand for the article during the past month was limited.

Rhubarb Firm

Rhubarb root continues in the firm position established some time ago. This is in sympathy with the higher cables from abroad and the remote possibility that shipments from China might be interferred with as demand on spot has been very quiet.

Peru Balsam Easier

Peru balsam eased off somewhat from the higher levels reached during the previous month. The commodity declined 5c per pound to the basis of from $1.05 to $1.10 per pound as to quantity. Competition has been fairly active owing to the more narrow sales outlet that developed in recent weeks.

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French Oil Syndicate

The Central Syndicate for essential oils and aromatic raw materials is actively interested in national and international unification of methods of essential oil analyzation and in creating in France an independent analytical laboratory and with this view appointed a commission to study the subject. The commission recently reported its conclusions which are as follows: the necessity for drawing up a compendium including all known essential oils indicating the limits of variation of their principal constituents; the desirability of establishing specifications for general application for determining each physical feature and chemical mixture; the need for international standardization of processes; the value of documentation and of centralizing information relating to the essential oil industry and the necessity for organizing representatives of essential oil interests in each country preparatory to international convention. (Department of Commerce Report).

Bergamot Oil Soft

Bergamot oil continues to occupy a rather soft position without any price changes being featured. There is considerable competition reported on spot and the current demand is hardly sufficient to lend any real support to the general tone.

No new developments are forthcoming from the Primary market relative to the consortium but it is said that the failure on the part of the consortium to take full control of the situation is due principally to the large stocks of oil held in most countries. Stocks in this country have been entirely ample to meet all demands.

The estimated production for 1932 is between 300,000 and 350,000 Sicilian pounds, and it is calculated that the carry over at origin and world stocks amount to at least 350,000 Sicilian pounds and possibly more. In some quarters the quantity is estimated at 500,000 pounds. This would give a total available supply for this year of between 650,000 and 700,000 Sicilian pounds. During the period January to October, 1931 shipments totaled about 320,000 Sicilian pounds.

Cassia Oil Quiet

Cassia oil is quiet and firm at from $1 to $1.05 per pound. There is no feeling on spot now that shipments will be interferred with in the primary market so that there has been no recent tendency toward higher prices.

Arnica flowers are lower in the spot market at from 9c to 10c per pound. An irregular and small demand has stimulated the competitive factor.

Geranium Very Firm

The geranium oil market continues very firm after the recent advance due to reports from the primary market of destruction wrought by the recent cyclone. Bourbon oil is selling at from $3.75 to $4.75 per pound with local sellers being reluctant to accept orders for delivery very far ahead owing to the continued firm reports from the source of supply.

Considerable trading has also been reported in African geranium oil and this commodity has also advanced sharply in sympathy with the Bourbon. Prices asked here are now on a basis approximately the same as the Bourbon variety.

There are some factors in the geranium oil market who are inclined to discredit, to a certain extent, the possibility of a continuance of the very strong position of the current market. These factors feel that in most cases of this kind early reports are inclined to be overstated. Whether or not there is to be an actual underproduction this year, however, will have to await detailed reports from the primary market.

Lemon Oil Firm

The Italian lemon oil market held firm both in the primary and spot market. The producing season in Italy is nearing an end and the present firmness, it is said, are based on conditions that are likely to maintain a firm position for this commodity for some time to come. Quotations are on the basis of from $1.10 to $1.40 per pound as to seller and brand.

A Department of Commerce report states that the Italian lemon oil output was estimated unofficially at 400,000 kilos for the period 1931-32, as compared with 600,000 during 1930-31, and 1,250,000 in 1929-30. Exports of lemon oil during the first nine months of 1931 aggregated about 523,000 kilos as compared with 800,000 during the entire year of 1930 and 555,300 in 1929. An increased demand for lemon oil was evidenced in January, 1932, with a resultant price increase. This demand, however, was of short duration, the general price tendency during that month being downward.

California lemon oil held steady at from $1.05 to $1.10 per pound. The "Four for Three Deal" brings the net cost down to 76½ cents per pound. It is said that a very large volume of business has been booked since the so-called "free deal" went into effect.

Croton Down Sharply

Oil croton has experienced another sharp decline during the past month now generally being offered in 25 pound tins at $3.00 per pound. The generally quiet market for this commodity is given as the reason for the lower quotations.

Peppermint Much Firmer

Peppermint oil is much firmer in the primary market than has been the case for a long time. Stocks are now said to be in firm hands who are financially able to carry them until a more active demand develops. The financial position of the producers was one of the outstanding factors that created the exceptionally low prices that have prevailed for many months.

It is said that the very unsatisfactory returns to producers on the Pacific Coast and in the Middle West during the past season will undoubtedly result in a sharp decline in acreage planted this year, and that this may amount to a reduction of 25 per cent. below that planted a year ago. The banks have shown no tendency to finance peppermint growers this year in view of the fact that this commodity has proven highly speculative due to the sharp declines that have been experienced.

Due to reports eminating from the primary market, rather than any increase in consumer interest here, the spot market has taken on a much firmer aspect. Natural oil is now quoted at from $1.45 to $1.50 per pound, with redistilled selling at from $1.65 to $1.70 per pound. It is said that only oil low in menthol content are being offered at below these prices.

The Department of Commerce reports that cultivation of peppermint in Germany on a commercial scale is contemplated to meet the needs of German peppermint oil factors now dependent on foreign sources, according to unofficial reports. A plant is being erected near Munich for peppermint oil distillation purposes. Exports of peppermint oil from the United States to Germany increased from 14,600 pounds valued at $61,000 in 1929, to 24,000 pounds valued at $76,000 in 1930.

Lime Oil Down Again

A further decline has been the feature of the lime oil market during the past month. Distilled is now quoted at from $6.85 to $7.35 per pound as to quality, and expressed is generally quoted at from $11 to $12.75 per pound, with slightly better than this being done on firm business in a quantity way.

New crop developments are now under way and there is a keener desire on the part of some sellers to reduce stocks.

Anise Oil Unchanged

Although recent cables from China indicate a slightly easier tone for anise oil, the market here is firm and without price change. The recent uncertainty as to whether shipments from the primary market would be regular or subject to interference has given way to a feeling that supplies of technical oil will come forward without undue delay.

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French Feel Depression

By O. C. Zilisch

CONDITIONS in France remain about the same, and unemployment is not increasing at any alarming rate. Business is not moving, and a certain sense of stagnation seems to exist, but there is nothing to become unduly pessimistic over. The perfume business, like any other type of trade, is suffering from the general depression in France. Paris is feeling the pinch of the depression a little more now than it did sometime ago, and certain large firms in the perfume business have found it necessary to either reduce personnel or effect a reduction in salaries. The reason for these steps has been, according to some of the heads of these firms, the condition of affairs in so large and hitherto profitable a territory as America.

Sharp Sales Drop

It is interesting to note just how the depression has hit some of the manufacturing perfumers, and the best example one can give is the fact that one of the best known perfume and toilet goods concerns of France is today doing between 15,000 and 20,000 Francs per day, whereas it used to attain figures as high as 150,000 or 200,000 Francs per day. Quite naturally, the decline has hit into the very middle of things, and the distilling perfumer of Crasse is left holding a pretty heavy bag. Certain essential oils from the Crasse Region are beginning to show a slight movement into production, but this movement is anything but satisfactory, due to the fact, of course, that the manufacturing perfumer finds himself in a situation that is difficult, to say the least.

The impression one receives here in France is that the depression is not so real as it is mental. People in France have read so much about the depression existing in other parts of the world that they, too, have taken to talking about it at every occasion. As a result, every one is treading water and buying has practically ceased in some quarters. The moment this period of fear and indecision is over, the French manufacturing perfumer and the distilling perfumer of Crasse will breathe much more easily.

Conditions in the Crasse region show one or two bright spots, particularly insofar as products like oil of lavender are concerned. In talking with a large distiller of lavender oil in the mountains recently, it was learned that a certain amount of activity is beginning to manifest itself with respect to lavender. Cable requests for prices from the United States have given the dealers and distillers of lavender oil the impression that there is going to be a development in the sale of lavender products that promises to become interesting, especially when compared with the stagnation that has existed for so long a time.

Considerable activity seems to be developing in the sale of lavandin, a cross between true lavender and spike lavender. It has been mentioned by some that this product is, of course, being used to sophisticate or elongate the true lavender product, thus cutting down the actual quality to the consumer of the resulting product. One can readily realize what this means when one takes into consideration that a good lavender oil, anywhere from 40 to 46 esters, costs on the open market between 90 and 100 francs per kilogram, and lavandin costs about 48 francs per kilogram. The temptation is, of course, to take the lavender oil at say 90 francs per kilogram and mix it half and half with lavandin. True, the actual amount of this being done is probably not excessive, but the danger of the whole situation is that a good many people have become exceedingly suspicious of all lavender products.

As has been pointed out from time to time, a decided effort is being made on the part of the Grasse distillers to do away with this adulteration or sophistication of lavender and other products. Considerable activity in this direction is noticeable, and it is hoped by those concerned that the next few years will see a complete change for the better.

Demand for violets among the distilling perfumers of the Grasse region is not very large this year, most of the violets being used for the cut flower trade or by the manufacturers of crystallized or candied violets. The Parma Violet has, as reported from time to time, practically disappeared from the Grasse section, insofar as the requirements of the distilling consumer are concerned. This flower used to be one of the important cultures growing in the Grasse region, but the past few years have brought a decided decrease in its use.

Mimosa Demand Small

The beautiful golden mimosa saw a relatively small demand among the distilling perfumers this season, practically all of the mimosa grown in the Grasse region having gone to the florists. This culture has grown to tremendous proportions among a number of the landholders on the Riviera, and some of these landholders are making a very fine thing of it, despite the decrease in demand for the mimosa among the distilling perfumers.

Cultures like the May Rose and the orange flower tree are doing very well, comparatively speaking. Naturally the extremely cold weather which hit all of France recently caused a certain amount of damage among the jasmin, the tuberose and the jonquil. The orange flower tree of the region held up under the cold in extremely fine fashion, although the last spell of cold has caused the growers no little concern. At this writing Paris and other sections of France are again being visited by severe cold weather. Everyone hopes, of course, that this is the last of the really freezing weather.

Jasmin Market

For certain cultures like the jasmin, which has had practically all of its exposed parts frozen, the trade and the growers are not worrying much. In fact, it was expressed by one of the large distilling perfumers just recently that it would be a blessing to everyone concerned if all the jasmin in existence were to disappear from the face of the earth. Jasmin still remains the sore spot throughout the entire section, because hold over stocks do not show any great signs of moving into production very swiftly. Big bargains still exist in the Grasse region in the purchase of jasmin product, and, apparently, some buyers are availing themselves of this opportunity.

The price of jasmin concrete remains at about 3,000 francs per kilogram. Every effort has been made to create activity on the market for jasmin products, but it has been felt that all of these efforts have resulted in little real substantial activity.

What people fear more than anything is the artificial activity developed from time to time, an activity which never results in anything worth while for any one. The consequence is no one can be found who becomes very heated about the *possibility for sale* at the present time. The only thing that counts today is an *actual order delivered and paid for*. This latter consideration is what every one is most interested in, for the reason that the money situation has in certain districts become quite acute.

Olive Oil Quiet

Everything possible is being done among the French to increase the sale of olives and olive oil. Olive culture in France has seen some very unfavorable conditions during the past few years, and practically all of the agricultural publications are printing articles with respect to the distress felt by the growers of olives.

The market at Marseilles for olive oil has not been very active, but there is a tendency toward higher prices.

Stocks of the olive oil cooperatives in Provence have been greatly reduced, and the dealers in this section of France are, of course, not too pessimistic. The gathering of olives in the Alpes-Maritimes Department has just ended, and the crop of olives this year is considered as being fair.

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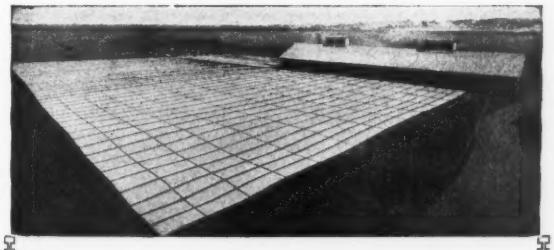

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(*Continued from page 246*)

lift, which, in raising the jar, brings the rim of the jar into contact with a release valve that allows a definite charge to pass into the container. We shall get the dope and illustrations on this and will report again.

Manufacturers who have the problem of rapid filling of a variety of powdered products or the filling of one powdered product into different-sized containers will be interested in the new Powder Filler just announced by the F. J. Stokes Machine Co., of Philadelphia. Although a single auger machine, it has a guaranteed speed on all ordinary containers of 40 per minute.

This new machine, while maintaining all the advantages of accuracy, cleanliness, ease of "change-over" and simplicity of operation, has had its speed practically doubled through basic mechanical changes.

The Accuracy and cleanliness of this machine are insured by the "two-step" fill, the design of the feed-hopper, the finely-adjusted filling mechanism, and the "no-can-no-fill" device which prevents discharge if there is no container in the filling position.

Tins, boxes, jars, cans, and cartons up to 9-ounce capacity and of practically any shape can be filled.

Various attachments, such as a conveyor for filled containers, an attachment for free-flowing materials and a dust collector, can be added if and when needed. These are in addition to the standard capper and automatic container discharge.

The manufacturer has prepared a bulletin describing and illustrating the features of this machine and will gladly send it on request.

Cleaning Glass Containers

The Karl Kiefer Machine Company, Cincinnati, O., has issued a very informative and interesting booklet on the cleaning of glass containers. The booklet describes the history of cleaning glass containers by machinery employing both water and compressed air. A very straightforward discussion of both methods is given and the limitations of either for particular types of products and containers is clearly stated. As usual with Kiefer publications the booklet is very well illustrated.

Filling Bulletin

U. S. Bottlers Machinery Co., Chicago, has issued a new, attractively illustrated catalog entitled, "Filling Machinery". It deals with the problems of mechanical filling of containers with liquids, semi-liquids, creams, ointments, semi-solids, etc. The book has been planned to tell the story of mechanical filling in a complete and understandable manner. The chief types of "U. S. Fillers" are described and the standard models of machines are completely illustrated. Copies may be obtained upon request.

Compounders' Corner

(*Continued from page 244*)

Essential Oil of Niaouli

This essential oil has remarkable antiseptic properties. It is extracted from the Melaleuca Viridi-flora tree which grows in New Caledonia (French Oceania) and is used by the natives to cure all kinds of illnesses, particularly colds. It belongs to the Myrtaceae family. The main constituents of the oil are:

Eucalyptol	60-70%
Dextro Pinen	10%
Terpineol Alpha	5%
Constituents not identified	15%

This essential oil has been extensively studied from the point of view of its application in medicine and surgery by a number of French scientists, among them, Prevet, M. G. Bertrand, Guiguen and Desgrez. Prevet advertised this oil extensively under the name of Gomenol, the commercial name under which it is mostly known in France. The last work on this subject has been published by P. Rigaud ("The Gomenol in Therapeutic and Surgery.") The result of this work seems to prove that Gomenol is the best antiseptic of vegetable origin known today. It has a phenol coefficient superior to carbolic acid and similar to mercury bichloride without being toxic or caustic. It has proved very useful in fumigation and in the treatment of pulmonary tuberculosis and illnesses of the breathing organs. Its innocuousness, as it is very well tolerated by human organisms, renders it very useful for injections washing of wounds, feminine hygiene, etc. Its affinity for streptococci makes this product an excellent remedy for puerperal fevers and all pulmonary troubles or infections caused by this micro-organism.

Permanent Wave Oils

Whatever the style for hair, long hair or short hair, permanent waving of the hair will always be one of the most important aids in beautifying the personal appearance. While the mechanical devices used for this purpose are of course essential, nevertheless the use of a hair oil to assist them in their work is not afforded the attention that it deserves. There is a tendency to use an ordinary hair oil for this purpose, but this practice must be decried. The real permanent wave oils are made with the aid of spike lavender oil, hazel nut oil, beech nut oil and the like. These oils have a specific action on the keratin of the hair which aids the setting of the permanent wave. Ordinary oils do not have this action.

Essential Oil of Hyacinth Flower

By fractional distillation, partial esterification with phthalic anhydride, and hydrolysis, following substances have been isolated and identified in portion of oil remaining after treatment with sodium hydroxide and sodium bisulphite and subsequent hydrolysis:—eugenol, benzyl alcohol, $CH_2.C_6H_5.OH.CH_2$, phenyl acetate, dimethylquinol, $CH_2.C_6H_5.CH_2OH$, cinnamyl alcohol, cinnamaldehyde, $CH.C_6H_5.CH.CHO$, benzaldehyde, benzyl benzoate, an ortho-methoxybenzoic ester (probably the methyl ester), a normal-methylanthranilic ester, methyleugenol, and normal heptyl alcohol. The form, melting point 97.5° to 98° C., of the diphenyl urethane of cinnamyl alcohol described in the literature appears to be a metastable form, since it is converted by seeding into stable form, melting point 103.4° to 104° C. L. Hoejenbos and A. Coppens. Receuil Travaux Chimiques volume 50, pages 1046-1049.

Essential Oil from Phellodendron Japonicum Maxim

Experiments on essential oil from fruits of Phellodendron Japonicum Maxim show that imperfectly ripe fruit yields on steam distillation 1.1% oil, from which, by fractional distillation, myrcene can be separated. It has been characterized by conversion into cis-4-isohexenyl-delta-4-tetrahydrophthalic anhydride by treatment with maleic anhydride. Amount of condensation product formed directly from the crude oil corresponds to presence of 78.4% of myrcene. K. Brand and G. Westerburg. Archiv der Pharmacie, volume 269, 369-383.

Essential Oil of Taiwania Cedar

Wood from Taiwania cryptomerioides, Hayata, gave 0.23% of an oil of density (15° C.), of 0.9593, index of refraction (15° C.) of +1.5104, coefficient of rotation of light (at 15° C.) of −2°, acid value of 0.38, ester value of 10.52, ester value after acetylation of 83.00. Caryophyllene, humulene, and cadinene were identified, and there was also obtained a sesquiterpene alcohol, taiwanol, boiling point 141°-143° C./6 mm. With hydrochloric acid the substance gave cadinene dihydrochloride, while oxidation gave a substance, melting point 170° C., and dehydration with formic acid gave cadinene. The alcohol is a tertiary alcohol either identical or isomeric with cadinol. K. Kafuku and R. Kato. Bulletin Chemical Society of Japan, volume 6, 65-74.

New Scalp Treatment

Ph. Chaleyer, New York, announces the development of a new treatment to stop falling hair and fortify hair roots. The treatment consists of bacteriological examination of the scalp to determine the causes of baldness, applications of a new ointment called "Sebatol," followed by a special treatment. Individuals or organizations interested in the promotion of this treatment are invited to communicate directly with Ph. Chaleyer.

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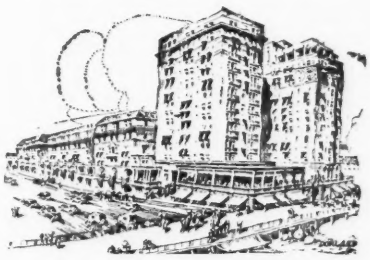

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A. M. T. A. Meeting at Ambassador

The American Manufacturers of Toilet Articles will again hold its meeting at the Ambassador Hotel, New York, the dates being set by the Entertainment Committee of the Association as April 26, 27, 28. It is planned by the Committee, which decided the time and place of the convention at its meeting on March 11, to restrict the attendance to 450 if possible.

Salisbury Resigns From Filler

V. B. Salisbury has resigned as president of Filler Machine Co., Philadelphia, due to ill health and is resting in Florida. He has been succeeded in the office of president by B. M. Ceyer.

Abbott Laboratories, North Chicago, has just issued the first number of a new quarterly, "Abbott's Digest." This publication is a medical, surgical and diagnostic digest of interest to the medical profession. This is the latest phase of the professional service carried on by Abbott as part of the work with the physician.

The Quartz Lamp

(*Continued from page 240*)

has been adulterated with cedar oil, inasmuch as iris oil will rotate the plane of polarized light to the left (characteristic of cedar oil) and the degree of the rotation is about equal of that of cedar oil.

10. Ylang-ylang oil and cananga oil. The difference between these oils can be very readily established, for the reason that the first oil, ylang-ylang oil, has a dark blue fluorescence and the second oil, cananga oil, a greenish fluorescence.

11. Sassafras oil, Heine. We have verified a dark violet fluorescence for this oil on the basis of the physical chemical constants. The oil of the unknown origin apparently contains admixtures, which is indicated by the constants.

12. Rue oil. It is stated in the literature (A. Wagner, "Die Parfuemerie Industrie", page 170), that the presence of methyl methylanthranilate in rue oil is questionable. The fluorescence test, however, shows that this ester is not present in rue oil.

13. Lemon oil. The fluorescence of the two oils, which are given in the above tabulation, differs. The first oil fluoresces with a weak whitish effect, and the second with a shimmery, weak bluish color. According to our information the oil from the Sieles firm was obtained by distillation, wherein it was possible that the methyl anthranilate was decomposed. The oil of unknown origin gave a bluish fluorescence which indicated that the aforementioned ester was present in the oil, and it could, therefore, be established that the oil had been obtained not by distillation, but by pressing.

14. Mandarin orange oil. The strongly shimmery violet fluorescence may be explained by the fact that methyl methylanthranilate is present in the oil.

15. Neroli oil. The effect of the fluorescence of the natural oil and of artificial mixtures is almost the same, and hence the fluorescence test could not be used for detecting the difference between the natural and the artificially prepared products. In spite of this fact, however, the approximate quantity of methyl anthranilate that is contained in the product can be estimated by observing the intensity of the fluorescence.

16. Petitgrain oil. The strongly shimmery blue fluorescence is explained by the presence of methyl anthranilate. The other constituents of the oil affect to some extent the true color of the fluorescence of methyl anthranilate.

17. Opoponax oil has a weak, whitish fluorescence. The opoponax resin, which was examined, was found not to fluoresce at all. However the alcoholic extract of the resin fluoresces with a light yellow color. Hence there must be present in the resin a substance, which is soluble in alcohol and which gives a light yellow fluorescence.

18. Anise oil. The fluorescence of this oil in a violet color effect is entirely normal. The reason for this is that anethol fluoresces with a light blue color, but the other constituents of the oil hide this color with the result that a violet effect is obtained.

19. Fennel oil. The cause of the whitish effect in the fluorescence of this oil is apparently that the constituents, particularly the terpenes, hide the typical fluorescence of anethol.

20. Jasmine oil. A natural oil, which was furnished by Chiris, was examined as well as two compositions. The natural oil had a whitish-brownish fluorescence (just like coffee and cream), but the compositions had different effects. Compositions number two showed the same fluorescence as the natural oil, but the composition number one differed very markedly therefrom.

This shows that the fluorescence test may be used in certain cases to tell whether a jasmine oil has been compounded or is the natural product.

21. Rosemary oil. The physical-chemical constants of the oil obtained from the Russian firm, in contradistinction with that furnished by Chiris, do not agree with which has been published in the literature. Nevertheless, the color of the fluorescence of the two oils differs very considerably.

22. Lavender oil. The effect of the fluorescence affords the possibility of quickly telling the difference between lavender oil and spike lavender oil.

23. Peppermint oil and spearmint oil. The peppermint oil may be readily distinguished from the spearmint oil, for the reason that the former has a whitish fluorescence, while the latter has a light greenish fluorescence.

24. Patchouly oil, which was furnished by Chiris, was distilled with steam, where at the residue fluoresced with a yellowish green color with whitish effects. The oil, itself, did not fluoresce. Hence the fluorescence of the oil is connected with presence of resin in it.

25. Santolina oil. This can be distinguished from sandalwood oil, for the reason that the latter possesses

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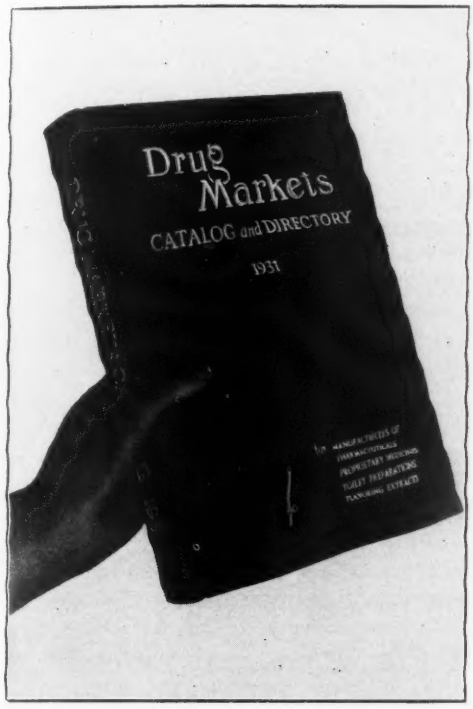

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a whitish efflorescence, but the former a greenish efflorescence.

The following conclusions can be drawn from these investigations.

I. The ultra violet rays often afford a possibility for determining the quality of the oils in respect to a number of ingredients therein. The fluorescence and the color must be considered together in this connection.

II. In certain instances the ultra violet light allows the distinction to be established between an artificially prepared, compounded oil and the natural oil.

III. The fluorescence allows the determination in several instances as to whether the oil was obtained by distillation or by pressing. (See for example lemon oil).

IV. It is possible to verify the freshness of the oil, for the reason that some oils, when they are stored for a long time or under improper conditions, develop resin contents which are readily detected by their characteristic fluorescence.

V. It is possible to tell quickly the nature of the oil by use of the ultra-violet light. This is true for example in the case of ylang-ylang oil and cananga oil, peppermint oil and spearmint oil, lavender oil and spike lavender oil.

VI. The authors did not have the time to study all the factors that affect the fluorescence of oils and which have an influence on the quality of the oil at the same time. These are for example the manner in which the oil was obtained, the different plants from which it was obtained, the climatic conditions, the time of the year in which the plants were harvested, etc. They, however, expect to make additional reports later on these investigations.

Making Creams

(*Continued from page 237*)

This illustrates the manner in which a lubricant is added to vanishing creams to mitigate the effect they are said to have on the skin. The absorption base, being a lanolin derivative, acts as a skin lubricant and also functions to stabilize the cream by preventing dehydration.

No. 4

The following cream illustrates a type of non-greasy cream made with absorption bases and containing no alkalis or stearic acid. It makes an excellent base for hand creams.

Light mineral oil	20 lbs.
Water	120 lbs.
Boric-Glycerine mixture	20 lbs.
Absorption base	20 lbs.
	180 lbs.

The Boric-Glycerine mixture consists of 30% boric acid and 70% of glycerine.

Procedure: Heat the mineral oil and the absorption base with half the water to about 90° C. Allow to cool gradually, stirring continuously until mass becomes smooth and homogeneous; then add the remainder of the water and the boric-glycerine solution. Mix thoroughly and when cold enough add the perfume.

The foregoing typical formulas serve to show that vanishing creams of the saponified type consist roughly of 20% of stearic acid, ¾ to 1% of alkalis and 60 to 75% of water. To this base can be added glycerine to give fluidity and to retard drying out; also absorption bases, lanolin (in small percentages), cocoa butter, mineral oil and other agents calculated to act as lubricants and, certain of them, as emulsifying agents and stabilizers.

Distilled water must always be used and it should always be fifteen to twenty-five degrees hotter than the melted fats when added.

So much then for the ingredients. What of the manufacturing and packaging problems involved? In the first place the problem of corrosion taken precedence over handling problems. Since vanishing creams as a general rule contain potassium stearate with an excess of stearic acid they will, especially when hot, corrode brass, bronze, copper, iron and steel. It is desirable therefore that all equipment used in the manufacture and packaging of such creams be made of resistant alloys or else insulated if possible with block tin, enamel, porcelain, or alloy linings.

Many firms prefer to use enamel lined pony mixers with wooden paddles. Any mixer will do provided it is properly insulated and equipped to permit at least two and preferably three speeds. The hot alkali solution can be made in tin lined melting tanks but manufacturers often prefer to use large white granite pails.

Whether the cream shall be filled hot or cold depends to a certain extent upon the type of cream and also upon the equipment available. Many of the vanishing creams on the market are filled by hand with a spatula, a slow expensive process because of the tendency of the cream to trap air. Most of the important filling machine manufacturers have introduced hopper type filling machines made of suitable alloys and equipped with some kind of forced feed mechanism to allow cold filling of vanishing and other creams. There are also several hopper type hand fillers for the smaller manufacturer and also for the large ones whose vanishing cream production is not great enough to warrant the setting up of their regular cream lines.

Because of the great percentage of water in creams of this type, the selection of the right closure, the right liner and also the proper method of applying the closure is of paramount importance. As a rule

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vanishing creams unless suitably sealed (and excepting those containing absorption bases) will dry out enough in one or two months to become unsalable.

Some manufacturers place a piece of light foil on the surface of the cream before the closure is applied. Others use wafers of transparent cellulose or glassine. This is a slow procedure when performed by hand. When production is large enough it can be done mechanically. The liner selected should be impervious, and resilient enough to allow deep seating when the cap is applied. Ordinary waxed board is not good enough for this purpose unless the jar has first been covered with a film of some protective material as described above. Most manufacturers use cork or composition liners with foil.

As to capping. If production does not warrant the purchase or the setting up of the capping machine and the capping must be done by hand, it will be found that the caps, if applied by girls, are not uniformly tight. Hand capping should be done by a man whose hands are strong and who can without fatigue force every cap home. After all the best cap and the best liner in the world will not give adequate protection unless it is properly applied. When production is as small as this it is much better to buy a hand capper which will permit the application of caps as fast as they can be applied by hand and will drive them home more uniformly.

Perfuming Creams

(*Continued from page 238*)

discoloration and disagreeable odors. Care should be taken to avoid using in this type of cream, indol, methylanthranilate, aldehydes, salicylates or any essential oils or bouquets containing these products as they will react and give discoloration or change the character of odor.

Vanishing Creams

These creams are generally made with stearic acid and alkalies: soda, potash and sometimes ammonia. They are stearate solutions and contain a large amount of water. Other products such as gelatins, gums or waxes are sometimes added to give more consistency or better stability. From this, one can see that due to hydrolysis, these creams are rather unstable and apt to take an alkaline reaction in ageing. Special care must then be taken in selecting a perfume that will stand and not provoke decomposition of the cream. Accordingly, esters which can be easily saponified such as formates should be avoided. Aldehydes should not be used for two reasons; first, because of their causticity and secondly because they are apt to enter into reaction with other aldehydes or ketones. Methylanthranilate, musk xylol, essential oils containing phenols such as clove, thyme, cinnamon, should not be used. The best type of odor and most stable in this particular cream is rose, as the best vanishing creams on the market are scented with rose. Lilac bouquets should be avoided as practically all of them contain heliotropine which is apt to discolor. Lily of the valley, which contains hydroxycitronellal, an aldehyde, should be rejected. Jasmin may be used if it does not contain indol or methylanthranilate, and orange blossom should also be disregarded for the same reason as jasmin.

Glass Durability

(*Continued from page 222*)

About 10 grams of the glass sample is weighed into a No. 90 mesh platinum or silver gauze bag. The glass is then washed free of dust by the use of absolute alcohol. The washing of the sample is continued until a constant weight is obtained. The bag and contents are then suspended in a quartz beaker containing 500 cc. of boiling distilled water and boiled for one hour, keeping the volume of the solution constant by small additions of hot water. The bag and contents are washed well, dried, and the loss in weight recorded. The same test, but using a fresh sample of glass, should be run using 2N sodium hydroxide or 2N sodium carbonate instead of water. It must be remembered however that this test does not take into account the condition of the original glass surface, which is a very important factor in the resistance of glass to decomposition.

A test that is easy to make and which parallels the action of certain alkaloids is by the use of narcotine hydrochloride. The test is conducted as follows: A solution made up of 1 g. of narcotine hydrochloride to 1 liter of distilled water is placed in the ware under test, which is placed in boiling water and boiled. The necks of the containers should be plugged with cotton. If the solution becomes cloudy in 10 min. boiling the ware is poor in durability. If the solution becomes cloudy after 10 min. and gradually increases, the ware is classed as moderate. If fine needles appear in the solution after 15-20 min. boiling and which do not materially increase in size, the ware is satisfactory in durability. If the solution is unchanged after 1 hour boiling, the glass is excellent in durability.

The following quick low temperature tests are recommended by W. E. S. Turner[2] ([2]Journ. Soc. Glass Tech., Vol. III, No. I, P. 37, 1919) for the testing of medical containers. Before test, the bottles are to be cleaned (a) by sterilizing in steam for 0.5 hr., or (b) by washing first with dilute acetic acid and then thoroughly with water.

After standing 24 hrs. with the following solutions:

1. 1-2% solution of morphine hydrochloride should be colorless, or at the most a pale yellow.

2. 0.5-1% solution of strychnine nitrate should cause no separation of crystals.

3. 1% solution of mercuric chloride should show no precipitation of the colored oxide.

4. Water containing a few drops of phenolphthalein should not develop a pink color when allowed to remain in a corked bottle.

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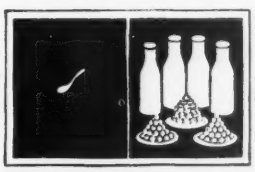

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NOTICE

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Patents

UNITED STATES PATENTS

Cineol Containing Oil Mixture

Process for preparation of 1:8-cineol containing oil mixtures consists in using terpene compounds which on treatment with acidic reacting agents may be converted finally into terpin hydrate. Compounds are treated with aqueous solutions of acidic reacting substances below 80° C. Reaction products are immediately removed. Rheinische Kampfer Fabrik G.m.b.H. Dusseldorf-Oberkassel, Germany. U. S. Patent No. 1,838,456, filed April 4, 1930.

Physiologically Active Extracts

Physiologically active extracts are prepared from hearts of warm blooded animals by treating fresh, water-containing hearts with acetone under a neutral to weakly alkaline reaction. Solution is freed from ballast materials, containing extractive from hearts practically free from albumen, lipoids and other ballast substances and being thermostable. Products are readily soluble in water, insoluble in alcohol and have intensive heart stimulating action. Winthrop Chemical Co., U. S. Patent No. 1,836,857, filed October 6, 1927.

Obtaining Bornyl and Isobornyl Esters

Bornyl and isobornyl esters are obtained by heating pinene with an aliphatic monocarboxylic acid and mixed acid anhydride of boric acid and an aliphatic monocarboxylic acid. Feature of process is that esterification is effected in two stages. First stage is effected with mixed acid anhydride of boric acid and an aliphatic monocarboxylic acid. Esterification is then completed by addition of free aliphatic monocarboxylic acid. Societe Alsacienne de Produits Chimiques, Paris, France. U. S. P. No. 1,836,287 filed August 20, 1928.

New Saccharin Drugs

Process is concerned with molecular compounds of paraiodo-ethoxybenzoic acid benzylester. These are made by reaction between the two ingredients used in molecular proportions. Thus one product is a molecular compound of para-iodo-ethoxybenzoic acid benzyl ester and pseudo-saccharine azide. Winthrop Chemical Co., New York. U. S. P. No. 1,836,125, filed April 15, 1926.

Synthetic Menthol

Process of making crystalline menthol by catalytic hydrogenation of cyclic ketones, yields mixture of crystalline menthol and a normally liquid product. Feature of present improvement consists in adding to the ketone that is to be hydrogenated, the normally liquid constituent of the hydrogenated ketone. Howard & Sons Ltd., Ilford, England. U. S. P. No. 1,811,711, filed June 19, 1924.

Collapsible Tubes Holder

Collapsible tube is provided with a suitable holder. A stand with upright members movable towards and away from each other, is provided. These upright members are adapted to engage the laterally projecting end portions of the tube base. There is a device at the upper end of the stand for clamping a relatively narrow portion of the tube adjacent its outlet end. There is a slidable device on the upright members for locking the same in clamping position with reference to the tube. Frank Wolf, New York. U. S. P. No. 1,811,220, filed January 18, 1928.

Quinolin-Benzoic-Carboxylic Acid

Patent is concerned with manufacture of products of above general type. Thus quinolin-2-2-benzoic-4-carboxylic acid, is made by combining in alcoholic solution unimolecular proportions of 2-phenyl-quinilin-4-carboxylic acid and sodium salicylate and heating. Reaction product may then be separated by usual methods. Willard L. Vogel, Los Angeles, Cal. U. S. P. No. 1,810,261 filed May 22, 1928.

Beta-Aminoamide Derivative of Arsinic Acid

This new pharmaceutical product comprises an arsinic acid compound which has in its molecule a normal beta-aminoamide side chain. The beta-amino group is connected to the aromatic nucleus. Parke, Davis & Co., Detroit. U. S. P. No. 1,839,848, filed March 19, 1928.

Phenylsalicylic Acid

Product, 5-phenylsalicylic acid, is made by oxidizing 5-phenylsalicylaldehyde with caustic alkali to the corresponding acid. The Dow Chemical, Midland, Mich. U. S. P. No. 1,839,526, filed May 12, 1930.

Thymol and Menthone

Process is concerned with improvement in treatment of halogenated thymolic ketones. A hydrogenated thymolic ketone, of empirical formula, $C_9H_{16}CO$, is heated with reduced nickel at approximately boiling point in absence of extraneous reactive hydrogen producing thymol and menthone. Orbis Products Trading Co., Inc., New York. U. S. P. No. 1,839,288, filed December 5, 1928.

Vermifuge Medicine

Vermifuge medicine, a mixture of copper sulphate, sodium arsenite, nicotine sulphate and hydrochloric acid in approximate ratio of thirty parts to three to five parts calculated on the dry basis. William A. Konantz, Quincy, Ill., assignor, Moorman Manufacturing Co., Quincy, Ill., U. S. P. No. 1,839,970, filed June 9, 1924.

GERMAN PATENTS

Manufacture of Vanillin

Process is manufacture of vanillin from safrol. It was found that considerable advantage was gained from use of alcoholic solutions of alcoholates. It is therefore possible to operate with far smaller quantities of splitting agents. Advantage is well manifested in subsequent operation of alkylation carried out with alkyl halides. Previously it was necessary to neutralize excess alkali but this does not have to be done in improved process. For example 100 parts of safrol are heated in autoclave with solution of sodium ethylate, consisting of 17 parts of sodium and 200 parts of ethyl alcohol. Heating is at 145° to 150° C. and takes 18 to 20 hours. J. D. Riedel-E. de Haen A.G., Berlin-Britz, Germany. G. P. No. 539,880, filed November 11, 1925.

Hair Dye

Hair dyes consisting of mixtures of haematoxylin and compounds of the aromatic series, for example diamines and aminophenols, are surprisingly free from objections to hair dyes ordinarily been used up to the present. One technical advantage of the new hair dyes is that their solutions remain clear and are stable. Furthermore, colors obtained with these dyes are stable to light, air and water. They contain only small amounts of basic substances, such as metaphenylenediamine, orthophenylenediamine, orthoaminophenol, para-aminodiphneylamine, which are added to change shade of dye. Important advantage of new dyes is they do not contain paraphenylenediamine. A mixture of ½ part of haematoxylin and 0.3 part of orthoaminophenol gives a fine blond effect. Mixture of ½ part of haematoxylin and 0.3 part of para-aminodiphenylamine gives a deep black which does not turn green. A mixture of half a part of haematoxylin and same proportion of paraminophenol gives a fine chestnut brown. I. Fehrmann, Danzig. G. P. No. 541,404, filed June 14, 1927.

Hair Rinsing Preparation

Patent is concerned with manufacture of preparation for rinsing hair after it has been washed with alkaline substances. Washing hair removes oil and leaves it brittle. Use of formaldehyde for rinsing or fixing the permanent wave gives a disagreeable odor. Dry mixtures of solid, weak acids and hexamethylenetetramine are stable for indefinite periods. However, when they are dissolved in warm water, formaldehyde is readily formed. It is only when the solid is subjected to very hot water that a strong odor is produced. Mixture may consist of 50 parts of tartar, 40 parts of tartaric acid, 9 parts of hex-

amethylenetetramine and 1 part of perfume. Coriolan Gesellschaft m.b.H., Berlin-Templehof, Germany. G. P. No. 534,838, filed March 5, 1930.

Cardiac-Active Glucoside from Squill

Aqueous squill substance is extracted with organic solvents not soluble in water, extraction taking place in presence of easily soluble salts. Fresh squill is finely comminuted in presence of sufficient quantities of easily soluble salts and a suitable organic solvent which is not miscible with water. Organic solvent is removed from time to time until all active substance has been completely removed from squill. Process does not contain any impurities in addition to heart-active glucoside. Chemische Fabrik vormals Sandoz, Basel, Switzerland. G. P. No. 511,794, filed March 17, 1927.

Hair Dye Thickener

There are added to hair dyes and hair bleaches such vegetable mucilages, as increase their viscosity but which do not cause the hair to mat together. Added substances are accordingly pulverulent, crumbly or easily comminuted. Dispersions of agar-agar or carragheen are used for these purposes. J. F. Schwarlose Soehne G.m.b.H., Berlin, Germany. G. P. No. 503,627, filed October 1, 1927.

Cholesterin Solutions

Process is for production of cholesterin solutions which contain considerable water. Solutions of cholesterin in a small proportion of a halogenated hydrocarbon are admixed with one or more monovalent alcohols diluted with water, until a perfectly clear solution is formed after original turbidity disappears. Friederick Passek, Hamburg, Germany. G. P. No. 523,144, filed September 11, 1927.

Lime Compounds of Carbohydrates

Process is for production of therapeutically valuable lime compounds of carbohydrates, which are predominately soluble and assimilatable. Calcium hydroxide acts on carbohydrates less than 60° C. Ernest Stern, Berlin, Germany. G. P. No. 522,302, filed October 13, 1925.

BRITISH PATENTS

Pastilles for Treating Wounds

Process consists in mixing pulverized cellulose, of which fibrous structure is retained, with salt with tervalent caution. Thus aluminum sulphate, iron sulphate or chromium sulphate is used with or without sodium acetate or sodium borate. Viscous mass obtained is then formed into pastilles. F. Itting. B. P. No. 361,233, filed March 11, 1931.

Pinene from Nopinene

Catalytic process for conversion of nopinene into pinene is described. Surface catalysts, of which porous tile, artificial zeolites, fuller's earth, bleaching earths are types, are stirred into nopinene at 115° to 150° C. Catalysts are preferably boiled with water and/or acid and dried before use. Schering-Kahlbaum A.G. Germany B. P. No. 356,020, filed October 24, 1930.

Fat Soluble Bismuth Salts

These products are valuable against spirilosis and syphilis. They are basic bismuth salts of the following compositions $R.CH(COOR^1).COOBi(OH)_2$ or $R^1COO.CR(BiOH).(COO)$. They are soluble in fat when the radical R is an alkyl group above C_6 and has one or more branch chains, R^1 being methyl, ethyl, etc. Examples are bismuth salts of ethyl hydrogen-secondary-heptylmalonate and beta-secondary-octylmalonate. Laboratoire Francaisde Chimiotherapie and A. Girard, Paris, France. B. P. No. 356,550, filed October 24, 1930.

Theobromine from Cocoa

Proteins in aqueous suspension of ground cocoa are solubilized by treatment with papain and pepsin. Mixture is then heated to 80° C. to allow liberated fat to settle. Filtered aqueous layer is used for theobromine extraction, and residues as food. L. M. Brown. B. P. No. 361,461, filed September 8, 1930.

Vitamin Extraction

Solvent vapor is introduced into solution or suspension of material, to be treated, for example codliver oil, soap, etc. Vapor condenses in fine droplets and passes through mixture before separation. E. Langfeldt and R. Hellerud. B. P. No. 361,343, addition to B. P. No. 334,950, filed July 19, 1930.

Products from Albuminous Materials

Remedies for cardiac diseases are manufactured from materials such as serum, blood, glands, skins, etc. by hydrolyzing in a medium of pH coefficient of seven to ten. Solution is then treated with organic solvents soluble in water. Treatment may be carried out both after or during hydrolysis. Solvent is removed. Product that remains is purified by elimination of lipins contained in it, an operation which is effected by extraction with suitable solvent media. Unnecessary physiologically active substances are removed by saponification. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. B. P. No. 359,523, filed August 17, 1930.

Basic Products from Cyclic Acids

Process is for the production of basic products from cyclic acids, such as chaulmoogric and hydnocarpic acid. An alicyclic carboxylic acid of the chaulmoogric or hydnocarpic acid type, or an ester, chloride, amide, or imino-ether derived therefrom, is condensed with a primary or secondary arylamine having a basic side chain containing tertiary normal-para-aminophenyl-beta-diethylamino ethyl ether is treated with hydrocarpyl chloride, boiling point 165° to 169° C./8 millimeters, in absolute alcohol to give hydnocarpic-p a r a-beta-diethylaminoethoxyanilide hydrochloride, melting point 94° to 96° C. The corresponding derivative from chaulmoogryl chloride, boiling point 170° to 175° C./8 millimeters, has melting point of 87° to 90° C. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. B. P. No. 357,250, filed June 20, 1930.

Calcium Gluconate Solutions

A small amount of calcium mannonate is added to the hot calcium gluconate solution before latter is sealed in ampoules. Ampoules are heated several times to 90° to 100° C. to destroy centers of crystallization. Chemische Fabrik vormals Sandoz, Basle, Switzerland. B. P. No. 359,862, filed March 21, 1931, addition to B. P. No. 314,460.

Thyroid Gland Preparation

Aqueous extract of thyroid glands is treated with 40 to 45 parts by volume, of saturated aqueous solution of ammonium sulphate, or with an aqueous saturated solution of another very volatile salt. Precipitate formed during process, is rejected and aqueous extract is then completely or fractionally precipitated by further addition of saturated solution, total of which added does not exceed 80% of original. Precipitates, which have character of I-albumoses, containing 0.6 to 0.8 per cent. of iodine, are purified by dialysis and reprecipitation. I. G. Farbenindustrie A.G., Frankfurt-am-Main, Germany. B. P. No. 349,966, filed February 28, 1930.

MISCELLANEOUS PATENTS

Purification of Essential Oils

Essential oils are treated in cold with ammonia acid washed with water which is removed. Quality of oils is much improved by this method. Various examples are given of application of process. H. Tircoire, Paris, France. French Patent No. 679,774, filed December 19, 1928.

Perfumes from Plants

Botanical products are treated with substances possessing high absorptive properties. Thus for example silica gel or activated charcoal are used in intimate contact with the starting materials. Recovery perfumes from absorbents is accomplished by extraction, heating, steam distillation or like, and absorbent is recovered. J. Petersen, Norway. French Patent No. 675,658, filed May 24, 1929.

Abstracts

Hydrargyrum Salicylicum

Sodium or potassium hydroxy-mercurisalicylates are formed by treating hydrargyrum salicylicum (ortho and para-anhydrohydroxymercurisalicylic acids) with sodium hydroxide or potassium hydroxide but the isolated crystalline products are anhydrides of uncertain composition. Method of determining mercury content in hydrargyrum salicylicum, which depends on replacement of mercury by iodine on treatment with solution of iodine, is interferred with by side-reactions (hydrolytic demercuration: $R.HgI+H_2O=RH+IHgOH$, and nuclear iodination), which may be avoided by methods in which excess of potassium iodide is used. Total mercury or organically combined mercury alone may be determined. Sodium or potassium hydroxymercurisalicylates are not alkaline to thymolphthalein and hydrargyrum salicylicum, which is dissolved in excess of alkali hydroxide, may be titrated with sulphuric acid either to the thymolphthalein endpoint, or better, until precipitation begins.

In a second method, sodium thiosulphate is added and the alkali liberated by the reaction $R.HgOH+Na_2S_2C_3=R.Hg\text{-}S.SO_3Na+NaOH$ is titrated. Thirdly, salicylisalicylic acid can be determined by dissolving the substance in a hundredth normal solution of sodium hydroxide, adding potassium iodide, and titrating with acid. Phenolphthalein is used as the indicator. Excess of acid is then added, the solution is refluxed until hydrolytic mercuration is complete and the excess of acid is titrated. The presence of mercury salts is detected by precipitation of mercury, when an alkaline solution of N_2H_4 or of formaldehyde and potassium bromide is added to the solid substance. Analyses have been made of hydrargyrum salicylicum, which was prepared by nine different methods, and the amounts of salicylsalicylic acid and dimercurisalicylsalicylic acid present as impurities, as shown by the differences in titration figures under different conditions, have been estimated. The presence of mercury salicylate and phenylmercurisalicylate is also indicated in some cases. F. Viebock and C. Brecher. Archive der Pharmacie, volume 269, pages 398-416.

Alkaloid Content of Salts

A rapid method for the determination of the alkaloids in medicinal preparations is described. Sample is weighed out in amount that contains from 0.03 to 0.04 gram of alkaloidal base. Two cc. of water, 1 to 2 drops of 10% hydrochloric acid and 70 cc. of chloroform are added. After shaking, three to four drops of 10% ammonia are added. Mixture is vigorously shaken, and 4 grams of sodium sulphate added in small quantities at a time. Chloroform is filtered, the residue washed 3 times with 8 cc. of chloroform each time, and about 90% of combined chloroform extract is distilled off. Ten cc. of 0.02 normal sulphuric acid are added to residue, and remainder of chloroform removed on water bath. Excess acid is titrated with 0.02 normal sodium hydroxide. Values identical with those given by usual extraction methods are obtained and method is also successfully adapted to determination of alkaloids in presence of other substances. E. Schulek and F. Szegho. Pharmazeutische Zentral., volume 72, 497-506.

Ipecacuanha Preparations

Preparations of ipecacuanha are made by double infusion in presence of hydrochloric acid. The pH number of preparation is 3.6. Hydrochloric acid present is 20 cc. of normal solution of the acid per 50 grams of drug. Analysis of preparations made in this manner, showed that 90% of total alkaloids contained in them were quite stable. They retained their total activity after three years. E. H. Madsen. Pharmazeutische Zeitung, volume 76, pages 901-902.

Germicidal Action of Essential Oils

A study of bactericidal activity of various essential oils. There is a close relation between bactericidal action and the solubility of oils in water. Oils consisting principally of esters, are less bactericidal than those mainly composed of alcohols. S. L. Malowan. Zeitschrift fuer Hygiene, volume 112, pages 93-94.

Disinfectant Action of Trichloroethylene

Emulsions prepared from trichloroethylene, chloroform and tetrachloroethane possess strong disinfectant properties. Solutions of phenol derivatives, salicylic acid and the like in trichloroethylene are active disinfectants only when emulsified. W. Rimpau Zeitschrift fuer Hygiene, volume 112, pages 202-221.

Sterilization of Cocaine Solutions

During technical sterilization of local anaesthetic cocaine solutions, water, ethyl alcohol and phenylurethane are lost and residual solution becomes richer in cocaine and sodium chloride. Experiments on 1% cocaine hydrochloride, showed that no appreciable decomposition of alkaloid took place during 15 minutes sterilization at 125° C., but by more prolonged heating or by sterilization partial decomposition resulted with the production of benzyl alcohol. In one experiment 30% of cocaine was decomposed during sterilization for 30 minutes at 150° C. W. Hoek. Dansk Tidsskr. Farm., volume 5, pages 37-42.

"Etrates" a New Type of Drug

The "Etrate," obtained by evaporating to dryness a concentrated extract of a drug with a proportion of the drug itself, presents advantages for oral administration over other preparations. The composition of Etrates from cinchona bark, bearberry leaves, valerian root, rhubarb root, senna leaves and ergot of rye are compared with those of corresponding fluid extracts and tinctures. Previously employed procedures are reviewed, and amounts of extractive obtained by 12 methods from the first four drugs mentioned above and the four corresponding Etrates are tabulated. C. Grimme. Pharmazeutische Zentral., volume 71, 657-659.

Phytosynthesis of Essential Oils

Synthesis of straight chain fatty acids from acetaldehyde and crotonaldehyde by aldol reactive and subsequent oxidation and reduction suggests that acetaldehyde may participate in building up fixed oils in plant tissue, but poisonous nature of these aldehydes on living tissue caused suggestion that aldehydes formed by enzyme carboxylase on an acid instantly reacts with methyl group of another acid molecule. Author attempts to elaborate this theory in application to essential oils. There is found to be closer relation between chemical compounds of oils comprised in any one order than between those of oils of different orders. Chemistry and Industry, 1931, page 989.

Fish Oil Vitamin

Unsaponifiable matter of fatty oil extracted from liver of Hippoglossus by means of low boiling petroleum can be freed from sterils by cooling the methyl alcohol solution and petroleum residue can then be fractionally absorbed on fibrous aluminum oxide. A fraction was obtained which distills in vacuum with some decomposition, and which gives characteristic reactions of a carotene derivative and has a Carr Price activity of 10,500 units. Karrer, Morf and Schoepp. Helvetica Chimica Acta, volume 14, page 1040.

Cibetone

Process depends on heating of a salt, (uranyl or thorium salt) of hexadecene-8-docarboxylic acid under vacuum at 300° to 500° C. for obtaining cibetone. Distillate is subjected to fractional distillation and cibetone obtained from fraction coming over between 120° and 180° C. under vacuum of half a millimeter of mercury, by preliminary conversion into semicarbazone. Other salts of aforementioned acid, such as alkali earth or rare earth salts may be used. Societe Anonyme M. Naef & Cie., Genf., Switzerland. Swiss Patent No. 136,543, filed October 9, 1928.

Tincture of Iodine

Formation of ethyl iodide and hydriodic acid occurs independently of action of light, even in 85% alcohol, but is prevented by potassium iodide. Tincture prepared from alcohol denatured with 5% of wood spirit, 25% of acetone, ½% of petroleum and traces of dyestuffs, quickly forms hydriodic acid and organic iodine compounds, chiefly iodoacetone. G. Panopoulos and J. Megaloikonomos, Extr. Prakt. Acad. Athenes, volume 2.

Oleonaphtha, Absorbent of Essential Oil

Experiments were carried out in Russia on oleonaphtha as an absorbent for essential oils from distillation water. The condensed water, which contains droplets of essential oil, is passed through a layer of oleonaphtha, whereby a saving of 1.77% is effected. Increase in yield with terpineol was 3.33%. V. I. Varentzev. Journal of Society of Chemical Industry of Russia, volume 6, 966-7.

Chloral in Chloral Syrup

New method has been worked out for determination of chloral in chloral syrup. This method is based on following reaction: $CCl_3CHO.H_2O+NaOH=CCl_3H+COONaH+H_2O$. Syrup, which contains approximately 5% of chloral, is analyzed by placing 25 grams of former in Erlenmeyer flask and then adding quantity of distilled water sufficient to give volume of 100 cc. Twenty cc. of normal soda solution are added and allowed to react for 1 minute, at end of which time, solution is titrated with normal sulphuric acid or hydrochloric acid, using phenolphthalein as an indicator, so as to determine proportion of unused soda. Quantity of chloral hydrate contained in syrup can be calculated by fact that 1 cc. of normal soda solution corresponds to 0.1655 units of chloral hydrate. In order to obtain best results it is absolutely necessary that duration of reaction of soda and chloral should be 1 minute. When time of reaction is prolonged, results are invariably too high. C. Ramierz. Rev. Quim. volume 6, 6.

Crystallized Product from Digitalis

Moist digitalis leaves are extracted with non-miscible organic solvents. Extraction takes place in presence of easily soluble salts, which give an extract which is separated, concentrated and mixed with ether, with result that glucosides are precipitated in form of tannoids. Precipitate is digested with ether and dissolved in aqueous organic solvent. Tannin is eliminated and solution concentrated until precipitation occurs. Precipitate is recrystallized. Further quantity may be obtained by suitably working up tannoid precipitate. Product, which gives on ultimate analysis 60.4% of carbon and 8% of hydrogen, has an angle of rotation of light of +25°C. (in 4% dioxan) at 20° C., and is 5 times as soluble in methyl alcohol as digitoxin, to which it has a cardioactive effect quantitatively equal but qualitatively somewhat different. Chemische Fabrik vormals Sandoz, Basle, Switzerland. B. P. No. 357,926, filed February 26, 1931.

Mercury Content in Mercury Ointment

One gram of sample is dissolved in 5 cc. of carbon tetrachloride. Ten cc. of 50% nitric acid are added, and, when all mercury has dissolved, 25 cc. of water are added, followed by so much potassium permanganate solution, 1 to 19 concentration, that the mixture remains red after vigorous shaking. Ferrous sulphate is then added in small quantities at a time until the solution is colorless and, after the introduction of half a gram of crystalline ferric nitrate, the liquid is titrated with tenth normal ammonium thiocynate. One cc. of this solution is equivalent to 1% of mercury. L. W. Winkler. Pharmazeutische Zentr., volume 72, pages 609 to 610.

Pine Needle Oil

Philippine pine-needle oil is obtained from pinus insularis. Steam distilled needles and twigs of Benguet pine yielded only 0.043% of dextro-rotatory greenish yellow oil having a density of 0.0582 at 30° C. (water at 4° C.), angle of rotation of +20.53°, index of refraction of 1.4700 at 30° C., acid value of 1.38, saponification value of 7.67, esters as bornyl acetate 1.75%; 4.9 and 85.3 distill below 155° and 164° C. respectively. Oil is soluble in 10 parts of 90% ethyl alcohol and appears to consist largely of alpha-pinene and beta-pinene. I. de Santos, A. P. West and P. D. Esguerra, Phillippine Journal of Science, volume 46, pages 1 to 5.

Determination of Formaldehyde

This investigation was concerned with determination of proportion of formaldehyde in certain pharmaceutical preparations and with manufacture of liquor formaldehydii saponatus. Influence of presence of ethyl alcohol, acetaldehyde and acetone on results obtained by 5 selected methods of analysis was recorded. Applications of results to analysis of above preparations showed formaldehyde content too low by 3%. loss of formaldehyde is due to action of potassium hydroxide during preparation of product and modified method for preparing liquor formaldehydii saponatus is suggested. J. Buechi, Pharmazeutische Zeitung, volume 76, page 1063.

Iodine and Chlorine in Iodized Oils

Authors have worked out method for determination of iodine and chlorine contents of iodized oils. Thus iodine and chlorine are converted into inorganic condition by refluxing with glacial acetic acid and zinc. Resulting iodine is titrated with 0.05 normal solution of potassium iodate in presence of excess of hydrochloric acid. Total proportion of halides present in oil is determined by Vollhard method and chlorine is obtained by difference. T. T. Cocking and G. Middleton. Quarterly Journal of Pharmacy, volume 4, pages 175 to 177.

Bismuth Salts of Organic Arsinic Acids

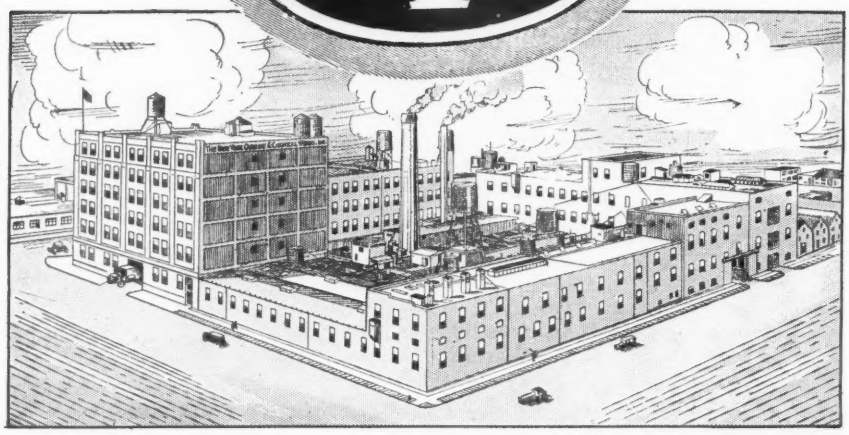
Inorganic bismuth salts dissolved in water with addition of glycerin or other suitable organic solvents, are allowed to act on alkali salts of arsinic acids in aqueous solution. Reaction takes place to complete neutralization of acid radicles of bismuth components. Salts obtained are insoluble in water and are suitable for treatment of trypanosomic and other blood diseases. Dr. Karl Streitwolf, Frankfurt-am-Main, Dr. Alfred Fehrle, Bad Soden, Taunus and Dr. Walter Herrmann, Frankfurt-am-Main, Germany, assignors, I. G. Farbenindustrie A. G., Frankfurt-am-Main, Germany. G. P. No. 518,516, filed Nov. 23, 1928.

Antibodies Against Syphilis Spirochetae

Animals are first subjected to a preliminary treatment, which is repeated several times and which consists in injecting them intrapleurally, intraperitoneally and intravenously in unspecific manner. Substances used for these treatments are similar chemically to those from which variously constituted life substances of syphilis bacteris are formed, for example with such substances as lipoid and lipoid-albumens, nucleo-proteins and albumens. Then treatment is followed with specific treatment with syphilis bacteria which have first been weakened in virulence and then with fully virulent bacteria, these injections being made several times in breast and stomach cavities as well as in veins of ears. Exudates of breast and stomach cavities, and extracts of lymphatic glands, ovaries, pancreas, the blood serum, etc. are removed and working up in usual manner. Dr. Salo Bergel, Berlin-Wilmersdorf, Germany. G. P. No. 513,694, filed April 24, 1929.

Substances Dietary and Therapeutic

A foodstuff which contains vitamin A, B, B_2 and E in addition to lime and phosphorus is prepared from mixture of whole wheat, wheat germ, yeast, bone meal and raising agents. Effects of heat, alkalies and acids on the vitamins are described. F. F. Tisdall. B. P. No. 357,223, filed June 18, 1930.



BIRD'S-EYE VIEW OF PLANT AND RESEARCH LABORATORIES

MANUFACTURERS OF

Quinine Sulphate
Codeine Sulphate
Bismuth Subnitrate
Potassium Iodide
Silver Nitrate
Acetanilid
Thymol Iodide
Bismuth Subcarbonate
Cinchonine
Cinchona Alkaloids
Cinchophen
Codeine Phosphate
Cinchonidine
Morphine Sulphate
Ethyl Morphine
Iodoform
Glycerophosphates
Opium
Brucine
Quinidine
Thymol
Salicylates
Strychnine
Bromide of Soda
Bromide of Potash
Bromide of Ammonia
Silver Salts
Menthol-Y (trade-mark reg.)
Vanillin

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ST. LOUIS DEPOT, 304 SOUTH 4TH ST., ST. LOUIS, MO.

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment.

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Chemicals

Acetanilid
Hyoscyamine Alk.

Acetanilid, USP, 200 lb bbls..lb	.24	.25
Acetone, pure 350 lb drs wks..	.12	.14
Acetphenetidin, 225 lb bbls..lb.	1.25	1.30
ACID, Acetylsalicylic, 225 lb ....bbls.	.75	.80
Agaric, 1 oz vials.....oz	...	3.50
Arsenous, USP, 220 lb bbls lb.	...	.18
Benzoic, USP, 100 lb bbls.lb.	.50	.55
Boric, 300 lb bbls.....lb.	.09½	.10
Cacodylic, 5 lb. bot.....lb.	...	8.00
Camphoric, USP, VIII 1 lb bot.....lb.	4.82	4.82
Carbolic, USP, crys 112 lb tins.....lb.	.17	.18
Cinnamic, 5 lb cans.....lb.	3.25	3.50
Citric, USP, crys 230 lb bbl ....lb.	...	.33½
USP, crys imp. 112 lb keg ....lb.	.35	.37
USP, powd 200 lb bbl...lb.	...	.34
Gallic, USP, 150 lb bbls..lb.	...	.74
Glycerophosphoric, 25% 1 lb bot.....lb.	1.40	1.75
Hydriodic, USP, 10% 5 lb bot.....lb.	...	.70
Hydrobromic, USP, 40% 155 lb. cbys.....lb.	...	.55
Hypophosphorous, USP, 30% ....lb.		
5 gal demis.....lb.	...	.85
Lactic, USP, VIII 100 lb cbys lb.	.53	.59
USP, X 100 lb cbys.....lb.	.57	.59
Phenylcinchonic.....lb.	...	3.25
Phosphoric, USP, Syr 70 lb drs.....lb.	.14	.15
Pyrogallic, crys 5 lb cans..lb.	1.30	1.40
Resublimed, 5 lb cans...lb.	1.60	1.70
Salicylic, USP, 100 lb bbls.lb.	.40	.45
Stearic, double pressed, bags ....lb.	.08½	.09½
Triple pressed, bags,....lb.	.10½	.12½
Succinic, 100 lb bbls.....lb.	...	1.35
Sulfurous, USP, 6% 100 lb cbys.....lb.	.05	.06
Tannic, USP, fluffy 50 lb bbls. ....lb.	.90	.93
Powd 200 lb bbls.....lb.	.80	.85
Tartaric, USP, 300 lb bbls.lb	.24½	.25
Aconitine, Alk, crys 1 oz vials ....oz.	...	30.00
Amorphous, 1 oz vials....oz.	...	20.00
Adeps Lanae, hyd 350 lb bbls lb.	.13	.15
Anhydrous, 350 lb bbls....lb.	.14	.16
Agaricin, 1 oz vis incl.....oz.	...	2.32
ALCOHOL, Benzyl, 5 lb bot lb.	1.20	1.35
F. O. B. Works.....		
Ethyl, USP, 190 pf 50 gal bbls.....gal.	...	2.563
Grain U. S. P. bbls....gal.	...	2.613
Pure tax free drums...gal.		
Ethyl.....	...	.473
Grain.....	...	.523
Denatured, (drums included) add 5c for bbls.		
No. 1 spec.....gal.	.335	.415
No. 5 comp.....gal.	.345	.425
23 a, spec.....gal.	.37	.49
39 b, spec.....gal.	.395	.515
40 m, spec .....gal.	.34	.46
Isopropyl refd 98-99% drs. incl.....gal.	.55	.60
Phenylethyl, 1 lb bot.....lb.	4.30	4.50
Aloin, USP, 100 lb cases....lb.	1.15	1.18
Aluminum Acetotartrate kegs ....lb.		1.60
Amidipyrine, 10 lb boxes....lb.	4.00	4.10
AMMONIUM, Acetate 100 lb kegs.....lb.	.38	.40
Benzoate, USP, 1 lb bot...lb.	...	1.27
Borate, 10 lb bot.....lb.	...	.35
Bromide, USP, 450 lb bbls.lb.	.35	.36
Carb, USP, lump 100 lb kegs ....lb.	...	.13½
USP, powd 100 lb kegs..lb.	...	.14½
Citrate, 100 lb kegs.....lb.	.90	1.30
Ichthyolate, as to brand..lb.	4.00	4.50
Iodide, USP, 25 lb jars...lb.	...	5.20
Phosphate, dibasic 250 lb bbls ....lb.	.48	.50
Salicylate, USP, 100 lb kegs ....lb.	1.15	1.20
Valerate, USP, 25 lb jars...lb.	2.75	2.90
Amylene Hydrate, 1 lb bot..lb.	...	7.10
Antipyrine, USP, 100 lb cans.lb.	2.00	2.50
Apomorphine Hydrochloride, ½ oz. vials.....oz.	22.60	22.70
Arecoline Hydrobrom, 1 oz vials ....oz.	5.25	5.35
Aspidospermine Amorphous..oz.	...	15.00
Atropine Alk, USP, 1 oz. vials ....oz.	6.50	7.00
Methyl bromide, 1 oz vials.oz.	...	25.00
Sulfate, 5 oz cans.....oz.	...	2.50
Single ounce.....oz.	...	3.00
Barbital, 1 lb. bot.....lb.	3.50	3.85
Barium Iodide, 5 lb box.....lb.	...	5.15
Sulfate, X-ray diagn bbls..lb.	.09½	.10
BAY RUM Porto Rico, 45 gal. bbls.....gal.	.75	.80
Domestic syn. 50 gal bbl..gal.	.70	.75
St. Thomas, 50 gal bbls...gal.	.80	.90
Benzonaphthol, 5 lb boxes...lb.	2.50	2.60
Benzoyl Cholride, 500 lb dr..lb.	1.00	1.05
Benzyl Benzoate, Medicinal FFC.....lb.	1.20	1.40
Chloride Redis, 160 lb cby.lb.	.30	.35
Formate, 1 lb bot.....lb.	3.25	3.50
Succinate, 160 lb cby.....lb.	...	5.25
BISMUTH, metal 100 lb cases ....lb.	...	.95
Ammon. Citrate, USP, 5 lb cans.....lb.	...	3.10
Betanaphtholate, 5 lb box.lb.	...	2.90
Citrate, USP, 5 lb cans....lb.	...	2.45
Chloride.....lb.	...	2.35
Hydroxide .....lb.	...	2.65
Nitrate, 25 lb jars.....lb	...	.95
Oxide anhydrous.....lb.	...	3.05
Oxychloride, 25 lb boxes...lb.	...	2.60
Salicylate, 25 lb boxes.....lb.	...	1.55
Subcarbonate, USP, 25 lb boxes.....lb.	1.35	1.40
Subcarbonate, X-ray diag 1 lb. bot.....lb.	2.30	2.37
Subgallate, USP, 25 lb boxes ....lb.	1.45	1.50
Subiodide, 5 lb lots.....lb.	....	4.10
Subnitrate, USP, 25 lb jar.lb.	1.20	1.25
Subsalicylate, USP, 25 lb boxes.....lb.	2.25	2.30
Tannate.....lb.	...	2.15
Borax, crys USP, 400 lb bbls.lb.	...	.06
Bromoform, USP, 5 lb bot cases ....lb.	1.65	1.90
Butylchloral Hydrate bot....lb.	4.00	5.00
Cadmium iodide, 10 lb bot...lb.	...	4.55
CAFFEINE Alk, USP, 1..... 100 lb kegs.....lb.	2.45	2.50
Citrated, 50 lb cans.....lb	2.20	2.45
Hydrobromide, 1 lb bot...lb.	4.80	5.00
Hydrochloride, 1 lb bot...lb	6.05	6.55
Sulfate, 1 lb bot.....lb.	5.40	5.90
Sodium Benzoate, tins....lb.	...	3.05
Salicylate, tins.....lb.	...	2.95
Calcium Bromide, 100 lb cs..lb.	...	.00
Carb, USP, 175 lb bbls. ...lb.	.05	.06
Gluconate, Gran. 125 lb..... bbls.....lb.	.45	.50
Powd .....lb.	.47	.52
Glycerophos, 250 lb bbls...lb.	...	1.05
Hypophos, USP, 25 lb cans lb.	.55	.60
Iodide, 5 lb bot.....lb.	...	4.85
Lactate, USP, 500 lb bbls lb.	.45	.50
Lactophosphate Soluble...lb.	...	1.20
Powdered tins.....lb	...	1.00
Insol, powd tins.....lb.	...	.50
Phosphate & Sulfate Tooth Paste grade, Works..lbs.	.03	.06
Sulfide, USP, 100 lb drs...lb.	.21½	.24
CAMPHOR, Jap. ref. slabs 100 lb. cases.....lb.	.47	.48
Refined powd.....lb.	.48	.49
½ oz tab, 100 lb cases....lb.	.57	.59
Liniment, bbls.....gal.	2.10	2.20
Monobrom, 100 lb cases...lb.	1.60	1.65
Casein edible, 100 lb kegs...lb.	.45	.55
Charcoal Animal medicinal jars incl.....lb.	...	.50
Charcoal Wood, powd, 100 lb. bbls.....lb.	.06	.07
Chloral Hydrate, USP, 25 lb jars.....lb.	.75	.77
100 lb drums.....lb.	.70	.75
Cholesterin.....lb.	10.25	11.00
Chloroform, USP, 50 lb drs...lb.	.25	.27
Chlorophyll, 1 lb. bot.....lb.	2.12	2.30
Chromium Sulfate Scales, tins .....lb.	.45	.50
Powdered tins.....lb.	.50	.55
Chrysarobin, 50 lb tins.....lb.	3.75	4.10
Cinchonine Alk, 100 oz tins.oz.	...	.34
Crystal.....oz.	.43	.46
Sulfate, 100 oz tins.....oz.	...	.23
Cinchonidin Sulfate, 100 oz tins .....oz.	.32	.35
Cincophen, U.S.P. kegs....lb.	...	2.75
Cocaine Alk, USP, 1 oz vial..oz.	...	11.07
Hydrochloride, USP,.....oz.	...	8.50
CODEINE Alk, 1 oz vials, 10 lots.....oz.	...	10.52
Hydrobromide.....oz.	...	8.92
Hydrochloride.....oz.	...	9.52
Nitrate, oz vl 10 oz lots....oz.	...	9.80
Phosp. oz vl, 10 oz lots....oz.	...	7.92
Salicylate.....oz.	...	8.25
Sulfate, oz vl, 10 oz lots...oz.	...	8.42
Colchicino Alk, USP, 1 oz vl.oz.	...	20.00
Salicylate, 1 oz vls.....oz.	...	35.50
Cream Tartar, USP, 300 lb bbls ....lb.	.19½	.20
Imp. powd. 224 lb bbls....lb.	.19½	.20½
Creosote, USP, 42 lb cbys....lb.	.45	.47
Carbonate, 150 lb.....lb.	1.50	1.60
Cresol, USP, 400 lb drums ..lb.	...	.18
500 lb drums.....lb.	.12	.15
DIGITALIN Pure, 1 oz vial..oz	15.00	15.50
Dover's Powder, USP, 5 lb tin ....lb.	2.75	2.80
Duboisine Sulfate, 1 oz vl....oz.	35.00	40.00
Emetine Alk, 15 gr vial.....oz.	...	.85
Hydrochloride, USP, 1 oz vl ....oz.	25.00	26.00
15 grain vials.....oz.	2.50	2.70
Ephedrine, alk. 25 oz. tins,..oz.	2.90	3.45
Hydrochloride, 25 oz. tins, oz.	2.25	2.70
Sulfate, 25 oz. tins.....oz.	2.25	2.70
Epsom Salts, USP, 200 lb bbls ....100 lb.	2.25	2.50
Imp. 100 lb bbls.....100 lb.	2.30	2.35
Ergotin Bonjean, 1 lb jars...lb.	18.50	19.00
Eserine Alk, 1 oz vials.....oz	...	50.00
Salicylate, 1 oz vials.....oz.	...	40.00
Sulfate, USP, VIII 1 oz vials ....oz.	...	40.00
ETHER, USP, 55 lb drums..lb.	...	.11
Anaesthesia, 55 lb drums..lb.	.21	.23
Nitrous, 1 lb bot.....lb.	...	.80
Ethyl Chloride, 200 lb bot...lb.	.22	.24
Ethyl Iodide, 5 lb bot.....lb.	...	6.25
Formaldehyde, USP, 100 lb cbys lc-l wks.....lb.	.07	.07½
Gall Extract.....lb.	.20	.21
GLANDULAR SUBSTANCES		
Duodenal Substance, 1 lb lots	...	4.75
Liver Substance (Hepatic) 1 lb lots.....oz.	...	4.25
Orchic Substance (Testicular)	...	3.75
Ovarian Substance, whole, 1 lb lots.....oz.	...	16.50
Ovarian Residue, 1 lb lots....	...	12.00
Pituitary Substance, whole 1 lb lots.....oz.	...	34.50
Pituitary Substance, Anterior Lobe, 1 lb lots.....oz.	...	23.50
Thyroid, U. S. P., 1 lb lots...	...	3.75
Oxgall Powder, 1 lb lots.....	...	1.25
GLYCERIN, CP, 550 lb drums ....lb.	...	.11½
Gold Chloride, bottles.....oz.	12.00	12.50
Guaiacol, liq. USP. 100 lb cbys.....lb	1.60	1.70
Crystals.....lb	2.25	2.50
Benzoate, 1 lb bottles.....lb.	...	13.00
Carbonate, 5 lb boxes.....lb.	1.70	2.50
Halazone, 5 lb bot.....lb.	2.75	3.25
Hexamethylenetetramine, USP, 100 lb dr.....lb.	.46	.47
Homatropine Hydrobrom USP. ....oz.	...	14.50
5 oz and 1 oz vials.....oz.	...	13.50
Hydrastine Alk, USP, 1 oz vial ....oz.	20.50	21.00
Hydrochlide, USP, 1 oz vials ....oz.	20.50	21.00
Sulfate, 1 oz vial.....oz.	22.50	23.00
Hydrastinine Hydrochloride, USP, 15 gr vials.....oz.		40.00
Hydrogen Peroxide, USP, soln 375 lb bbls.....lb.	.03½	.04½
Hyoscine Hydrobrom, USP, 1 oz vials.....oz.	5 oz, 1 oz vials.....oz.	13.07	13.57
Hyoscyamine Alk, crystals, 1 oz vials.....oz.	...	25.07
Amorphous, 1 oz vial...oz.	...	75.07

Hydrobromide, USP, 1 oz vial ... oz.	...	25.00
Sulfate, 1 oz vial ... oz.	...	25.07
Hypoquinone, 100 ib kegs ... lb.	...	1.10
ICHTHYOL, tins ... lb.	4.00	4.25
Iodide Arsenous, 5 lb bot ... lb.	...	5.20
Arsenous-Mercuric soln, 5 lb bot ... ql	...	.26
Iodine, crude, 200 lb kegs ... lb.	...	2.98
Resublimed, 25 lb jars ... lb.	...	3.75
Tincture bbls ... gal.	...	3.40
Iodoform, powd 10 lb bot ... lb.	...	5.50
Iron & Ammonium Citrate, USP, 50 lb cans ... lb.	.52	.54
Chloride, USP, lump 400 lb bbls ... lb.	.06	08
Citrate, USP, VIII 25 lb can ... lb.	.94	.99
Hypophosphite, 5 lb cans ... lb.	1.40	1.50
Iodide, 1 lb bottles ... lb.	...	4.28
Phosphate, USP, 50 lb cans ... lb.	...	.69
& Potas Oxalate, 250 lb bbl ... lb.	...	.45
Pyrophosphate, USP, 50 lb ... lb.	.74	.80
& Sod Oxalate, 50 lb. cans. lb.	...	.30½
Sulfate, USP, crys bbls ... lb.	.04	.04¼
Ferrous dried bbls ... lb.	...	.08
Valerate, tins ... lb.	2.75	3.00
Jalap Resin, USP lumps, 5 lb tins ... lb.	...	4.00
Powdered, tins ... lb.	...	4.65
Lead Acetate, USP, 100 lb kegs ... lb.	.16½	.19½
Iodide, USP, VIII 5 lb bot. lb.	3.20	3.40
Lecithin, 5 oz jars ... oz.	1.00	1.30
Licorice Ext Mass, cases ... lb.	.19	.20
Compound powder, bbls ... lb.	.11	.13
LITHIUM CARBONATE, 250 lb bbls ... lb.	1.25	1.35
Citrate, USP, 100 lb kegs .. lb.	...	1.40
Iodide, 5 lb bottles ... lb.	...	5.65
Lobeline Sulfate, ¼ oz vial ... oz.	...	8.75
Magnesium Carbonate, USP, 100 lb bbls ... lb.	.08	.09
English, oz blocks ... oz.	.16	.18
Glycerophosphate, 5 lb tins ... lb	3.20	3.25
Hypophosphite, 5 lb cans .. lb	1.10	1.15
Salicylate, 100 lb kegs ... lb	...	1.10
Stearate, bbls ... lb.	.23	.25
Manganese Glycerophosphate, 5 lb tins ... lb.	2.90	3.00
Hypophosphite, USP, VIII 5 lb cans ... lb.	1.35	1.40
Iodide, 1 lb bottles ... lb.	6.40	6.65
MENTHOL, USP, 60 lb cases ... lb.	3.25	3.45
Synthetic, cases ... lb.	2.75	3.00
Mercury Metal, 75 lb flasks .. fl.	70.00	71.00
Bichloride, crys 25 lb box .. lb.	...	1.08
Gran powd, 100 lb kegs .. lb.	...	.93
Bisulfate, 25 lb boxes ... lb.	...	1.48
Blue Mass, 25 lb boxes ... lb.	...	.84
Powd, 25 lb boxes ... lb.	...	.85
Blue Ointment, USP, 50%, 25 lb cans ... lb.	...	.90
Mild 30%, 25 lb cans ... lb.	...	.89
33 1/3% mercury ... lb.	...	.94
Calomel, 50 lb boxes ... lb.	...	1.51
English ... lb.	2.65	2.75
Iodide, green, 25 lb jars ... lb.	...	4.53
Red, USP, 25 lb jars ... lb.	...	4.13
Yellow, USP, VIII, 25 lb jars ... lb.	...	4.03
Red precip Powd. USP, 25 lb boxes ... lb.	...	1.04
White precip, Powd., USP, 25 lb. boxes ... lb.	...	1.59
Salicylate, 25 lb bot ... lb.	...	2.32
With chalk, USP, 25 lb boxes ... lb.	...	.69
Methanol, Pure 1c-1 drs ... gal	...	.44
Methyl Salicylate, USP, 50 lb cans ... lb.	.40	.42
Methylene Blue, USP, med 5 lb cans ... lb	2.00	2.05
Milk powd, 150 lb bbls ... lb.	.09	12
MORPHINE Alk. 5 oz tin ... oz.	10.90	10.95
Acetate, 5 oz tins ... oz.	8.75	8.80
Hydrobromide, 5 oz tins, 10 oz lots ... oz.	8.75	8.80
Hydrochloride, 5 oz tins, 10 oz lots ... oz.	8.75	8.80
Ethyl Hydrochloride, 5 oz tins 10 oz lots ... oz.	...	10.85
Sulfate, 5 oz tins, 10 oz lots ... oz.	7.85	8.00
Naphthalene Flake, 175 lb bbls wks ... lb.	.04½	.05
Balls, 250 lb bbls wks ... lb.	.05½	.06
Oxgall, Purified, 5 lb bot ... lb.	1.75	2.50
USP, 5 lb bot ... lb.	2.00	2.50
Oxyquinoline Sulfate, tins ... lb.	8.50	9.25
Pancreatin, USP, 100 lb ... lb.	...	1.90
Paraffin, refd, 200 lb cs slabs 118 -120 deg MP ... lb.	.08	.09
128-132 deg MP ... lb.	.07½	.07¾
Para-Aldehyde, USP, 100 lb carboys ... lb.	.48	.50
Pepsin, USP, 100 lbs. 1:3000 lb.	...	2.25
100 lbs. 1:6000 ... lb.	...	4.00
100 lbs. 1:10000 ... lb.	...	6.50
Peptone, powd, 5 lb bot ... lb.	...	1.50
PHENOBARBITAL, U. S. P., 1 lb. bot ... lb.	8.50	9.00
Phenolphthalein, U. S. P. ... 100 lb drums ... lb.	.72	.74
5 lb cans 100 lb lots .. lb.	.80	.85
Yellow ...	.67	.75
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz lots ... oz.	...	3.25
Nitrate, 25 oz lots ... oz.	...	3.25
Single ounce ... oz.	...	3.50
Alkaloid, 15 gr vials ... vl.	...	.75
Piperadine, 25 oz bottles ... lb.	...	8.00
Popodhyllin 5 lb bottles ... lb.	4.35	4.50
Potassium Acetate, USP, 100 lb kegs ... lb.	.29	.30
Bicarb, USP, crys 320 lb bbls ... lb.	.09½	.10
Bromide, USP, crys 100 lb cs ... lb.	.31	.32
Citrate, USP, 50 lb bbl ... lb.	.42½	.43
Guaiacol Sulfonate ... lb.	1.95	2.25
Potassium Hypophosphite, 10 lb. cans ... lb	.65	.70
Iodide, USP, 50 lb cases .. lb.	...	2.50
Lactophosphate, 4 ox bot .. lb.	...	.90
Permangan, USP, crys, 100 lb drs wks ... lb.	.16	16½
Phosphate dibasic pure, kegs ... lb.	...	.49
Salicylate, 25 lb cans .. lb.	...	1.18
Sulfate, USP, VIII, 100 lb kegs ... lb.	.13	.15
Sulfocyanide, CP 15 lb jars lb.	...	.50
Tartrate, CP, tins ... lb.	...	.65
Pyrogallol, USP, see Acid Pyrogallic ...	...	...
Quinidine Alk, 100 oz tins ... oz.	.75	.80
Sulfate, 100 oz tins ... oz.	...	.50
QUININE SULFATE, USP, 100 oz tins ... oz.	...	.40
1 oz tins, 100 oz lots ... oz.	...	.50
Acetate ... oz.	...	.74
Arsenate ... oz.	...	.76
Benzoate ... oz.	...	.74
Bisulfate, USP ... oz.	...	.40
Citrate ... oz.	...	.50
Dihydrobromide ... oz.	...	.54
Dihydrochloride, USP ... oz.	...	.54
Ethyl Carbonate, 16 oz tins ... oz.	...	.54
Ferrocyanide ... oz.	...	.74
Formate ... oz.	...	.72
Glycerophosphate ... oz.	...	.92
Hydrobromide, USP ... oz.	...	.50
Hydrochlorosulfate ... oz.	...	.54
Hypophosphite ... oz.	...	.70
Lactate ... oz.	...	.98
Phenolsulfonate ... oz.	...	.78
Phosphate ... oz.	...	.62
Salicylate, USP ... oz.	...	.52
Tannate, USP ... oz.	...	.40
Tartrate ... oz.	...	.74
Valerate ... oz.	...	.78
Urea Hydrochloride, USP ... oz.	...	.54
Rennet, N. F. 5 lb 1:25,000 ... lb.	2.95	3.50
Resorcinol, USP, 25 lb cans .. lb.	1.57	1.65
Rochelle Salt, USP, 225 lb bbl ... lb.	.16	.15½
Rock Sugar, 5 lb boxes ... lb.	...	.15
Saccharin, USP, 10 lb cans ... lb.	1.70	1.80
USP, Soluble, 10 lb cans ... lb.	1.75	1.85
Salicin, USP ... lb.	...	12.50
SALOL, USP, 100 lb drums. lb.	...	.90
Saltpetre, powd, bbls wks ... lb.	.06½	.08¼
Santonin, USP, bulk ... lb.	90.00	97.00
Saponin, refined ... lb.	1.30	1.50
Seidlitz Mixture, 250 lb bb .. lb.	.13	.13½
Silver Metal, American ... oz.	...	.29¾
Iodide, 16 oz lots ... oz.	...	.69
Nitrate, 100 oz bottles ... oz.	.24	.25
Nucleinate, bulk ... oz.	...	.37
Proteinate ... oz.	.39	.41
SODIUM BENZOATE, USP, 100 lb bbls ... lb.	.42	.47
Bromide, USP, 100 lb kegs lb.	.31	.32
Cacodylate, USP, 25 lb bot ... lb.	4.75	5.90
Citrate, USP, X 50 lb kegs lb.	.34½	.36
USP VIII, 50 lb kegs ... lb.	.28½	.30
Glycerophosphate, N F., crys 25 lb cans ... lb.	1.27	1.33
Powder, 25 lb tins ... lb.	1.32	1.38
Soln, USP, 25 lb tins .. lb.	1.05	1.15
Hypophosphite, USP, 25 lb cans ... lb.	.60	.65
Iodide, USP, 25 lb jars ... lb.	...	3.50
Phosphate (Mono-Sodium), 100 lb kegs ... lb.	.28	.29
Di-Sodium USP, granular, 275 lb bbls ... lb.	.07½	.08
Pyrophosphate, 100 lb kegs ... lb.	...	.29
Salicylate, 100 lb kegs ... lb.	...	.47
Sulfocarbolate, USP, 100 lb kegs ... lb.	...	.25
Sulfocyanate, CP crys, jars included ... lb.	...	.60
Spartein Sulfate, USP, 25 oz bulk ... oz.	.65	.70
Single oz vial ... oz.	.77	.90
STRONTIUM BROMIDE USP, 50 lb kegs ... lb.	.46	.47
Carb, 100 lb kegs wks ... lb.	...	.20
Iodide, USP, 25 lb jars ... lb.	...	4.00
Lactate, kegs ... lb.	.90	1.10
Nitrate, 600 lb bbls NY ... lb.	.08	.08½
Imp. bbls NY ... lb.	.08	.08¾
Salicylate, USP, 100 lb keg lb.	...	1.10
Strophanthin, USP, 1 oz vial. oz.	19.00	19.00
Crystals ... lb.	75.00	75.00
Strychnine Alk, USP crys, 100 oz tins ... oz.	...	.55
Powdered ... oz.	...	.45
Acetate ... oz.	...	.65
Arsenate, 25 oz cans ... oz.	...	.65
Glycerophosphite, USP ... oz.	...	.65
Hydrobromide ... oz.	...	.65
Hydrochloride ... oz.	...	.65
Hypophosphite ... oz.	...	.75
Nitrate, USP ... oz.	.55	.72
Phosphate ... oz.	...	.65
Sulfate, USP, powd ... oz.	...	.37
Sugar, refined, 275 lb bbl 100 lb	5.80	5.90
Milk, USP, 200 lb bbls ... lb.	.18	.20
Sulfonethylmethane, USP, 10 lb boxes ... lb.	3.85	4.05
Sulonmethane USP, 10 lb box ... lb.	2.65	3.85
Sulfur flwrs. washed, USP, 125 lb bbls ... lb.	...	.06
Iodide, USP, VIII, 5 lb bot lb.	...	4.55
TARTAR EMETIC, USP, 300 lb bbls ... lb.	.29	.31
Terebene, tins ... lb.	...	.85
Terpin Hydrate, USP, 100 lb kegs ... lb.	.33	.35
Theobromine Alk, 5 lb cans .. lb.	1.90	2.25
Sod. Salicylate, 1 lb bot ... lb.	...	2.10
Sod. Benzoate, 1 oz vials .. oz.	...	1.00
Thymol, USP, 25 lb tins ... lb.	1.25	1.40
Iodide kegs ... lb.	...	5.00
Veratrine Alkaloid ... oz.	...	2.25
Sulfate, 1 oz vials ... oz.	...	2.25
Witch Hazel Ext., 50 gal bbl ... gal.	.60	.80
Zinc Carb, USP, 100 lb keg .. lb.	.28	.31
Chloride, USP, 25 jars ex .. lb.	.24	.29
Iodide, 5 lb bottles ... lb.	...	5.22
Oxide, USP, 100 lb bbls. .. lb.	.13	.14
Stearate, USP, 50 lb bbl .. lb.	.19	.21
Sulfate, USP, 100 lb bbl .. lb.	.08	.09
Sulfocarbolate, 100 lb kegs .. lb.	.23	.26

Miscellaneous

Castor Oil, odorless, bbls ... lb.	...	.12½
Chalk drop, 175 lb. bbls ... lb.	...	.03½
Precip. light, 250 lb. cask .. lb.	...	.04½
Heavy 540 lb casks ... lb.	...	.02½
Bulk ... ton	...	5.00
English light, bags ... lb.	...	.04½
English light, casks ... lb	.05½	...
Cocoa Butter, fingers ... 12 lb. box ... lb.	.24	.26
Cod Liver Oil Nor. 30 gal. bbls	22.00	24.00
Newfoundland ... bbl.	...	31.00
Collodion U. S. P. 30 lb. dr .. lb.	...	.23
Colors certified; 1 lb. cans, 5 lb cans		
Amaranth No. 107 ... lb.	2.50	2.60
Brilliant Blue F.C.F. ... lb.	12.75	13.00
Erythrosine No. 517 ... lb.	16.50	17.00
Orange Ind. 85 ... lb.	2.50	2.60
Ponceau 3R No. 56 ... lb.	4.75	5.00
Tartrazine No. 94 ... lb.	2.50	2.60
Corn Syrup 42° 50 gal. bbl. ... 100 lb.	3.91	4.16
Gelatin, USP, Silver 100 lb. cases ... lb.	.55	.60
Pure Food, 50 lb. bbl ... lb.	.53	.55
Glucose, (grape sugar) dry 70° bags c-l NY ... 100 lb.	3.14	3.24
Haarlem Oil, bot 6 gross cases ... gross	...	3.75
Imported, 5 gr. cs ... gross	...	3.50
Kaolin, Bags ... lb.	.06	.08
Colloidal Grade 200 lb. tin lined wooden drums ... lb.	.15	.29
Mineral Oil White, 50 gal. bbls. 80-85 vis ... gal.	.45	.50
85-90 vis ... gal.	.65	.70
125-130 vis ... gal.	.75	.85
290 vis ... gal.	.80	.90
Russian 110-115 vis ... gal.	.62	.67
145-155 vis ... gal.	.70	.75
320-330 vis ... gal.	.80	.90
Olive Oil, Edible bbls ... gal.	1.45	1.55
Paraffin Wax, fully refined, slabs 125 @ 127 A.M.P. bags lb	...	.03
130 @ 132 A.M.P. bags lb.	...	.04¼
135 @ 137 A.M.P. bags lb.	...	.05
Petrolatum, Lily White, USP. 400 lb. bbl ... lb.	.08	08½
Snow White USP, 400 lb. bbls ... lb.	.09	.11
Rice Starch, 140 lb bags ... lb.	.09	.10
Soap Castile, bars 40 lb. Case ... Cs.	...	12.75
Powd. USP 250 lb. bbls ... lb.	.26	.28
Green, USP, 450 lb. bbls ... lb.	.07½	.07¾
Neutral, powd. 200 lb bbls. lb.	.18	.20
Talc, Italian, 220 lb bags ... ton.	60.00	80.00
French, 220 lb bags ... ton.	40.00	45.00

Waxes. See Drugs & Spices

Aromatics and Essential Oils

Acetophenene, CP, 1 lb bot	lb.	3.50	3.65
Aldehyde, C 8 (Otcyl) 1 lb bot	lb.		38.00
C 7, 1 lb bot	lb.	4.50	5.50
C 9 (Nonyl), 1 lb bot	lb.		56.00
C 10 (Decyl), 1 lb bot	lb.		36.00
C 14, 1 lb bot	lb.		18.00
C 16, 1 lb bot	lb.		16.00
AMYL ACETATE, pure, 25 lb cans	lb.	.43	.50
Butyrate, 1 lb bot	lb.	1.25	1.50
Butyrate, 5 lb bot	lb.		1.00
Cinnamate, 5 lb bot	lb.	9.50	9.75
Formate, 1 lb bot	lb.		1.75
Formate, 5 lb bot	lb.		1.60
Phenyl Acetate, 1 lb bot	lb.	4.50	5.00
Salicylate, 100 lb cbys	lb.	.75	.80
Imported	lb.	2.25	2.50
Anethol, 2 lb bot	lb.	1.10	1.35
Anisic Aldehyde, 1 lb bot	lb.	3.10	3.60
Benzaldehyde, USP, 40 lb cbys	lb.		
50 lb cbys	lb.	1.35	1.45
FFC, 40 lb cbys	lb.	1.25	1.35
Benzoic Ether, see Ethyl Benzoate			
Benzophenone, 1 lb bot	lb.	1.75	2.25
Benzyl Acetate, 100 lb cbys	lb.	.65	.85
Alcohol, 5 lb bot	lb.	.85	.95
BENZYL BENZOATE		1.10	1.15
Medicinal, FFC	lb.		1.40
Buytrate, CP, 1 lb bot	lb.	9.25	9.50
Benzyl Cinnamate, 1 lb bot	lb.	7.00	7.25
Formate, 1 lb bot	lb.	3.15	3.25
Propionate, 1 lb bot	lb.	2.50	2.65
Succinate, 1 lb bot	lb.	5.25	5.50
Valerate, 5 lb bot	lb.	3.00	3.25
Borneol, 1 lb bot	lb.	1.35	1.85
Bornyl Acetate, 1 lb bot	lb.	1.50	2.00
Bromstyrol, 25 lb cases	lb.	3.75	3.85
Butyl Anthranilate dom, 1 lb bot	lb.		
Carvol, 5 lb bot	lb.	3.00	3.40
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50
Alcohol liquid, 1 lb bot	lb.	2.50	2.60
Crystallizable	lb.	7.00	8.00
Aldehyde	lb.	2.25	2.50
Imported, 1 lb bot	lb.	7.75	9.00
Citral, 25 lb cans	lb.	1.65	3.00
Citronellal 1 lb bot	lb.	2.00	4.00
Citronelyl Acetate, 1 lb bot	lb.	4.25	4.50
Coumarin, 25 lb cans	lb.	3.50	4.00
DECYL ALCOHOL	lb.	22.00	25.00
Diphenyloxide, 25 lb tins	lb.	1.05	1.20
Diphenyl Methane	lb.	1.75	2.00
Dundecyl Alcohol	lb.	20.00	22.00
Ethyl Acetate, pure, 5 lb bot	lb.	.05½	.06½
Benzoate, 5 lb bot	lb.	1.25	1.50
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00
Caproate, 1 lb bot	lb.	3.25	3.50
Cinnamate, 1 lb bot	lb.	4.00	4.50
Formate, 5 lb bot	lb.	1.00	1.25
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00
Valerate, 5 lb bot	lb.		3.75
Salicylate, 5 lb bot	lb.	1.95	2.00
Eucalyptol, USP, 50 lb cans	lb.	.55	.60
Eugenol, USP, 25 lb cans	lb.	2.50	3.00
Geraniol, 50 lb cases	lb.	1.75	2.35
Geranyl Acetate, 1 lb bot	lb.	2.75	2.80
Butyrate, 1 lb bot	lb.	13.00	13.50
Formate, 1 lb bot	lb.	12.00	12.50
Heliotropin, 100-10 lbs	lb.	1.65	1.75
Imported	lb.	1.95	2.05
Hydroxycitronellal, 1 lb	lb.	4.75	6.75
Indol, CP, 1 oz bot	oz.	2.90	3.00
IONONE, 1 lb bot 100%	lb.	5.00	6.00
Alpha	lb.	4.50	4.70
Beta	lb.	5.70	5.75
Methyl	lb.	5.00	5.25
Iso Borneol	lb.	2.25	2.35
Iso Bornyl Acetate	lb.	3.00	3.20
Iso-Butyl Benzoate, 5 lb bot	lb.	2.75	3.00
Iso-Eugenol, 1 lb bot	lb.	3.50	3.55
Iso-Safrol, 1 lb bot imp	lb.	1.75	1.85
Domestic, 5 lb bot	lb.	3.50	3.75
Linaiol from Bois de Rose, 5 lb bot	lb	1.90	3.90
Linalyl Acetate, 1 lb bot	lb.	2.00	3.00
Benzoate, 1 lb bot	lb.	13.00	14.00
Formate, 5 lb bot	lb.	10.50	12.00
METHYL ACETOPHENONE	lb.	2.00	2.15
Anthranilate, 1 lb bot	lb.	2.15	2.20
Imported	lb.	2.70	2.75
Anthranilic Acid	lb.	8.25	8.50
Benzoate, 5 lb bot imp	lb.	1.25	1.35
Domestic, 5 lb bot	lb.	1.25	1.35
Cinnamate, 1 lb bot	lb.	3.35	3.85
Heptenone, 1 lb bot	lb	3.50	4.00
Paracresol, 1 lb bot	lb.	4.50	8.00
Phenylacetate, 5 lb bot	lb.	3.75	4.00
Salicylate, USP, 500 lb dr	lb.		.40
50 lb cases	lb.		.42
Mirbane rect. 1,000 lb drs	lb.	.12	.13
Musk Ambrette 1 lb cans	lb	6.00	6.25
Ketone 1 lb cans	lb	7.55	7.80
Xylene 5 lb cans	lb.	2.25	2.85
Nerolin 1 lb cans	lb.	1.35	1.40
Octyl Alcohol 1 lb bot	lb.	16.00	18.00
Oenanthic Ether lb bot	lb.	1.90	2.00
Oleoresin Aspidum			
USP, bot and tins	lb.		1.25
Capsicum, USP, bot and tins	lb.	2.45	3.20
Cubeb, USP, bot and tins	lb.	2.50	2.75
Ginger bot and tins	lb.	2.25	2.75
Malefern see Aspidum			
Orris, bot & tins	lb.	12.00	15.00
Pepper, black, USP, bot & tin	lb.		9.50
Vanilla, bot & tins	lb.	7.00	7.75
Paracresol Methyl Ether	lb.	4.25	4.50
Paracresyl Acetate	lb.	5.50	5.75
Para Cymene Refd 110 gal dr	gal.	2.25	2.50
PHENYLACETALDEHYDE 50% 1 lb bot	lb.	4.50	4.75
Imported 50%	lb.	4.50	4.75
100%	lb.	8.00	8.25
Phenylacetic Acid 1 lb bot	lb.	2.65	2.90
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25
1 lb bot	lb.	8.00	10.00
Imported	lb.	7.00	7.75
Phenylethyl Alcohol 1 lb bot	lb.	4.40	4.65
Phenyl Ethyl Acetate	lb.	8.25	8.75
Butyrate 1 lb bot	lb.	15.00	16.00
Formate, 1 lb bot	lb.	19.00	21.00
Propionate, 1 lb bot	lb.	10.00	12.00
Valerate, 1 lb bot	lb.	14.00	15.00
Phenylpropylalcohol, 1 lb bot	lb.	8.50	9.00
Rhodinol, 1 lb bot	lb	6.25	20.00
Saffrol, drums	lb.	.30	.32
60 lb cans	lb.	.32	.34
Skatol, 1 oz bot	lb.	4.50	7.00
Terpinyl Acetate, 25 lb cans	lb.	.85	.90
Imported, 25 lb cans		.85	.90
TERPINEOL, CP, 1000 lb drs	lb.	.27	.29
50 lb cans	lb.	.31	.33
Absolute, 25 lb cans	lb.	.48	.50
Imported, 25 lb cans	lb.	.58	.60
Valerianic Ether see Ethyl Valerate			
Vanillin (Clove Oil), USP	lb.	5.50	5.75
(Guaiacol) USP	lb.	5.00	5.25

Essential Oils

Almond Bitter, USP, 5 lb bot	lb.	2.15	2.25
Bitter, ffPA, 5 lb bot	lb.	2.25	2.40
Sweet, 56 lb cans	lb.	.40	.43
Almond Meal, 25 lb cans	lb.	.20	.21
Amber crude, 25 lb tins	lb.	.15	.17
Rectified, 25 lb tins	lb.	.50	.53
Amber liquid, 400 lb drs	lb.	2.20	2.30
Ambergris, Black, boxes	oz.	14.00	15.00
Gray boxes	oz.	32.00	36.00
Angelica Root, 1 lb bot	lb.	21.00	31.00
Anise Tech, 400 lb drums	lb.	.36	.38
USP, 60 lb cans	lb.	.38	.40
Apricot Kernel, 50 lb cans	lb.	.26	.27
Bay, 25 lb tins N. F. V., 50.55% Phenol	lb.	1.70	1.85
Terpeneless	lb.	4.25	4.45
BERGAMOT, 25 lb coppers	lb.	1.90	2.10
Terpeneless	lb.	6.25	9.25
Artificial, 25 lb cans	lb.	1.25	1.50
Birch, Sweet, Northern, 25 lb tins	lb.	3.00	3.10
Southern, 25 lb tins	lb.		1.85
Birch Tar, rect., 5 lb bot	lb.	.50	.55
Crude, 50 lb tins	lb.	.13	.14
Bois de Rose, tins			
Brazillian	lb.	.65	.70
Cayenne, tins	lb.	1.25	1.50
Cade, 25 lb cans	lb.	.25	.26
Cajuput, native, 50 lb tins	lb.	.55	.60
Calamus, 5 lb bot	lb.	2.75	3.00
Camphor Sassa, 1000 lb drs	lb.	.20	.21
White, 400 lb drs	lb.	.15	.16
Cans, 50 lbs	lb.	.17	.18
CANANGA, Native 25 lb tins	lb.	1.45	1.60
Rectified, 25 lb tins	lb.	2.00	2.10
Caraway, USP	lb.	1.45	1.50
Cardamon, NF, 1 lb bot	lb.	16.00	28.00
Cascarilla, USP, 1 lb bot	lb.	65.00	80.00
Cassia,			
Redist, USP, 50 lb cans	lb.	1.00	1.05
Cedar Leaf, 50 lb tins	lb.	.75	.85
Cedar Wood, light, 1000 lb drs	lb.	.31	.33
Celery, 1 lb bot	lb.		7.50
Chaulmoogra, USP 80 lb cases	lb.		1.50
Cinnamon Ceylon, 1 lb bot	lb.	9.00	10.00
Leaf, 5 lb bot	lb.	1.85	1.95
CITRONELLA Ceylon, 1000 lb drs	lb.	.32	.34
50 lb tins	lb.	.34	.36
Java, 400 lb drs	lb.	.50	.52
50 lb tins	lb.	.52	.54
Civet, Abyssin, horns	oz.	2.10	3.00
Cloves, USP, 50 lb cans	lb.	1.00	1.05
6 lb bot	lb.	1.15	1.20
Copaiba	lb.	.45	.50
Coriander, USP, 10 lb bots	lb.	4.25	4.50
Croton USP, 25 lb tins	lb.	3.00	3.25
Cubebs, USP, 5 lb bot	lb.	2.55	2.65
Cumin, 1 lb bot	lb.	7.00	7.50
Dill, 25 lb cans	lb.	3.15	4.65
Erigeron, 20 lb tins	lb.	.95	1.05
EUCALYPTUS Austl, USP, 56 lb cans, cases	lb.	.26	.27
500 lb drs	lb.	.24	.25
Fennel, USP, 25 lb tins	lb.	.95	1.10
Geranium African, 25 lb tins	lb.	3.75	4.75
Bourbon, 28 lb tins	lb.	3.75	4.75
Turkish, 28 lb tins	lb.	1.75	1.90
Ginger, 1 lb bot	lb.	4.25	4.40
Gingergrass, 28 lb tins	lb.	2.50	2.70
Grape Fruit	lb.	2.90	3.00
Hemlock, 25 lb tins	lb.	.85	1.00
Juniper Berries, USP, 25 lb tins	lb.	1.35	1.40
Wood, 50 lb tins	lb.	.50	.60
Labdanum, 5 lb bot	lb.	5.50	6.00
LAVENDER, USP, 28 lb tins	lb	1.75	2.00
Spike Spanish, 50 lb cans	lb.	.57	.75
Lemon Ital, 25 lb cans	lb.	1.10	1.40
California 35 lb cbys	lb.	1.05	1.10
Lemongrass, native, 50 lb cans	lb.	.51	.53
Limes, expressed, 25 lb tins	lb.	11.00	12.75
Distilled, 25 lb tins	lb.	6.85	7.35
Linaloe Mex., 70 lb cases	lb.		1.75
Mace, distilled, 50 lb tins	lb	1.00	1.05
Mandarin, 25 lb cases	lb.	4.20	4.70
Musk Pods Cabardine, tins	lb.		
Musk Tonquin, tins, Pods	oz.	24.00	26.00
Grains Cabardine, tins	oz.		
Tonquin, tins, Grained	oz.	28.00	34.00
MUSTARD, USP, 1 lb bots	lb.	8.50	9.00
Artif, USP, 5 lb bot	lb.	1.50	1.60
Neroli Bigarade, ¼ & ½ & 1 lb bot	lb.	80.00	110.00
Petale, 1 lb bot	lb.	95.00	105.00
Artificial, 1 lb bot	lb.	5.00	15.00
Nutmeg, USP, 50 lb tins	lb	1.00	1.05
ORANGE BITTER, 25 lb tins	lb	1.75	2.10
Sweet W Ind, 25 lb tins	lb	1.25	1.50
Italian, 25 lb cop	lb	1.70	2.00
Orange American, Cold pressed 25 lb tins	lb.	1.70	1.80
Distilled, 25 lb tins	lb.	.90	1.00
Spanish, 25 lb tins	lb.		1.50
Oil Orris, concrete	oz.	4.75	5.00
Origanum, 50 lb cans tech	lb.	.25	.27
Parsley, 1 lb bot	lb.	6.50	6.75
Patchouli, 5 lb bot	lb.	4.00	4.35
Pennyroyal, dom, 25 lb tins	lb.	1.75	1.95
Imported, 25 lb tins	lb.		1.05
Pepper Black lb.			6.00
Peppermint, nat. 60 lb cases	lb.	1.45	1.50
Redis, USP, 60 lb cs	lb.	1.65	1.70
Petit Grain S A., 25 lb tins	lb.	1.00	1.10
French, 1 lb bot	lb.	4.50	4.75
Italian, 25 lb tins	lb.	2.20	2.30
Pimento Leaf, 25 lb tins	lb.	1.35	1.50
Berries, 25 lb tins	lb	3.00	3.10
Pine Needle Siberian, cans	lb.	.58	.63
Pinus, Sylvestris, 25 lb tins	lb.	1.30	2.00
Pumilio, USP, 25 lb tins	lb.	1.90	1.95
Rose Fr, 8, 16, & 32 oz pkgs	lb.	14.00	17.00
Bulg, 8, 10 & 32 oz pkgs	oz.	7.75	14.00
Rosemary, USP, 27½ lb tins	lb.		.40
1000 lb drums	lb.		.39
Tech, 25½ lb tins	lb.		.34
Rue, 1 lb bot	lb.	2.25	2.50
SANDALWOOD, E Ind, USP, 100 lb case	lb.	6.50	7.25
W Indian (Amayris), 25 lb tins	lb.	2.85	2.95
Australian, Tins		5.65	5.65
Sassafras, USP, 50 lb cans	lb.	1.05	1.07
Artificial, 1000 lb drs, 60 lb cans	lb.	.27	.29
Safrol, cans	lb.	.36	.38
Sage, Dalmatian, 25 lb. cans	lb.	2.15	2.25
Savin, 50 lb tins	lb.	2.00	2.25
Snakeroot, Canada	lb.	8.25	8.50
SPEARMINT, USP, 50 lb tins	lb	1.15	1.25
Spruce, 50 lb tins	lb	.90	.95
Tansy, American, 25 lb tins	lb.	2.15	2.30
Tar, 50 gal bbls	lb.	.25	.30
USP, 50 gal bbls	lb.	.75	1.50
Thyme, red, NF, 25 lb tins	lb.	.80	.95
White, NF, 25 lb tins	lb.	.90	1.00
Tech, 110 lb drums	lb.	.70	.75
Turpentine, USP, rect cbys	lb.	.27	.30
Vetivert Bourbon, 10 bot	lb.	4.75	5.00
Indian, 1 lb bot	lb.	25.00	38.00
Java, 1 lb bot	lb.	12.00	13.00
Wine, heavy, 1 lb bot	lb.	1.50	1.60
WINTERGREEN Gaultheria, true, 25 lb tin	lb.	8.00	10.00
Southern, 25 lb tins	lb.	3.75	4.00
Synthetic see Methyl salicylate			
Wormseed, Balt, 25 lb tins	lb.	2.15	2.25
Wormwood, dom, 25 lb tins	lb.	3.85	4.10
Ylang Ylang Bourbon, 10 lb tins No. 1	lb.	5.25	5.50
10 lb tins No. 2	lb.	5.20	5.25
Manila, 1 lb bot	lb.	30.00	36.00

Aconite Root, USP, bags	lb.	.13 .14
Agar Agar, No. 1, bales	lb.	.82 .84
Agar Agar No. 2, bales	lb.	.75 .77
Almonds Meal	lb.	.23 .28
Aletris Root, bags	lb.	.19 .20
Alkanet Root, bags	lb	.09 .10
ALOES, Cape, 400 lb cases	lb.	.11 .12
Curacao, 140 lb cases	lb.	.17 .19
Socotrine, Whole, 300 lb cs	lb.	.32 .37
Althea Root, bags	lb.	.19 .21
Cut cases	lb.	.17 .24
Angelica Root, bags	lb.	.12 .13
Angostura Bark, bags	lb	.17 .18
Anise Star case	lb	.17 .18
Spanish, bags	lb	.07 .08
ARABIC GUM, White, No. 1, 220 lb bags	lb.	.15 .16
Seconds, 220 lb bags	lb.	.13 .14
Sorts, Amber, 220 lb bags	lb.	.07 .07½
Powd, USP, 300 lb bbls	lb.	.12 .15
Areca Nuts, 100 lb bbls	lb.	.05 .07
Powd, 100 lb bbls	lb.	.10 .11
Arnica Flowers, bales	lb.	.09 .10
Root, bags	lb.	.42 .43
Arrowroot, St. Vincent, powd bbls	lb.	.10 .11
Asafoetida, 250 lb cases	lb.	.17 .18
Powd, 50 lb boxes	lb.	.29 .30
Balm Gilead Buds, bags	lb.	.25 .26
Balmony Herbs, bales	lb.	.12 .14
BALSAM COPAIBA Para, 80 lb cases	lb.	.17 .18
South American, USP, 80 lb cases	lb.	... .24
Peru, 120 lb cases	lb.	1.05 1.10
Tolu, 90 lb cases	lb.	.70 .80
Barberry Bark, of root, bags	lb.	.16 .17
Bayberry Bark, bales	lb.	.08 .09
Wax bbls	lb.	.17 .19
BELLADONNA LEAVES, bale	lb.	.13 .15
Root, bags	lb.	.11 .12
Bees Wax, White, cases	lb.	.38 .42
Yellow refined cases	lb.	.25 .27
Yellow Crude Cases	lb	.17 .18
Benzoin Gum, Siam, boxes	lb.	1.15 1.25
Sumatra, cases	lb.	.24 .26
Berberis Aquafolium Root, bags	lb.	.08 .09
Beth Root, bags	lb.	.09 .10
Black Indian Hemp Root, 100 lb bags	lb.	.11 .12
Blood Root, bags	lb.	.11 .12
Blueflag Root, bags	lb.	.13 .14
Boldo Leaves, bales	lb.	.15 .17
Boneset Herb, bales	lb.	.08 .09
Borage Flowers, bales	lb.	.13 .14
Broomtop Herb Cut, bales	lb.	.07 .08
Bryonia Root, bags	lb.	.09 .10
BUCHU LEAVES Short, 250 lb bales	lb.	.16 .17
Long bales	lb.	.75 .80
Buckbean Leaves, bales	lb.	.08½ .09
Buckthorn Bark, bags	lb.	.05 .06
Berries, bags	lb.	.29 .34
Burdock Root, bags	lb.	.08 .09
Seed bags	lb.	.30 ...
Burgundy Pitch, 110 stand gross for net	lb.	.08 .09
Imported	lb.	.10 .11
Calabar Beans, bags	lb.	.15 .16
Calamus Root, Etchd cases	lb.	.30 .35
Unbleached, bags	lb.	.07 .08
Calendula Petals, imp bales	lb.	.28 .33
Calisaya Bark, bales	lb.	.19 .20
Powdered, bbls	lb.	.25 .26
Canary Seed, South America, bags	lb.	.05 .05½
Dutch, bags	lb.	.05 .06
Candelilla Wax, bags	lb.	.14 .15
Cannella Alba Bark, bales	lb.	.25 .26
Cannabis, U.S.P.	lb	.18 .25
Cantharides, Chinese, cases	lb.	.85 .90
Powdered, boxes	lb.	1.00 1.05
Russian, cases	lb.	1.25 1.30
Powdered, boxes	lb.	1.50 1.60
Caraway Seed, African, bags	lb.	.04¾ .05¾
Dutch, 11 lb bags	lb.	.06½ .06¾
Cardamon bleached, cases	lb.	1.00 1.05
Decorticated, cases	lb.	.57 .58
Carnauba Wax No. 1, 100 lb. bags	lb.	.22 .24
Cascara Amarga, 150 lb bbls	lb.	Nom ...
So called bales	lb.	.50 .75
CASCARA SAGRADA, 1929 bark	lb.	.17 .18
1930 bark	lb.	.16½ .18
1931 bark	lb.	.09 .09½
Cascarilla Bark, quills, bales	lb.	.70 .80
Siftings, bbls	lb.	.65 ...
Cassia Batavia No. 1 bbls	lb.	.08½ .08¾
Shortstick, bales	lb.	.07½ .07¾
Batavia No. 3, bales	lb.	.06½ .07
China Select Rolls, cases	lb.	.03 .03½
Broken, bales	lb.	.05¼ .05¾
Saigon, thin	lb.	.20 .21
Buds, cases	lb.	.18 .20
Fistula, baskets	lb.	.09 .10
Catnip, Herb, bales	lb.	.16 .17
Celery Seed, bales	lb.	.19 .20
Ceresin Wax, White, bags	lb.	.10 .15
Yellow 200 lb. bags	lb.	.09 .12
Imp. 100 lb. bags	lb.	.25 .38
CHAMOMILE FLOWERS Roman, bales	lb.	.32 .35
Hungarian, cases	lb.	.14 .16
Charcoal Willow, powd, bbls	lb.	06 .06½
Wood, powd, bbls	lb.	.04 .05
Chestnut Bark	lb.	.07 .08
Leaves bales	lb.	.05 .05½
Chicle Gum, lb bbls	lb.	.32 .49
Chiretta, bales	lb.	.14½ .17½
Cinnamon, Ceylon, No. 1, bales	lb.	.15 .16
No. 2 bales	lb.	.12 .12½
No. 3 bales	lb.	.11½ .12
Clover Tops, Red, bags	lb.	.10 .11
Cloves Zanzibar, 135 lb bbl	lb.	.15 .15½
Cochineal, Black	lb.	.69 ...
Silver	lb.	.75 ...
Cohosh Root, Black, bags	lb.	.05 .06
Blue, bags	lb.	.06 .07
Colchicum Root, bags	lb.	.10 .12
Seed, bags	lb.	.60 .65
COLOMBO ROOT, bags	lb.	.05 .06
Colocynth Pulp, bales	lb.	.16 .17
Coltsfoot Leaves, bags	lb.	.06 .07
Comfrey Root, bags	lb.	.10 .11
Condurango Bark, bags	lb.	.09 .10
Coriander Seed, Morocco, bags	lb.	.03½ .04
Bleached, bags	lb.	.05½ .06
Corn Silk, bales	lb.	.05½ .06
Cotton Root Bark, bales	lb.	.06½ .07
Cowhage, 1 oz tins	lb.	1.00 ...
Cramp Bark so called bales	lb.	.05 .06
True, bags	lb.	.26 .28
Cranesbill Root, bags	lb.	.07½ .08
CUBEB BERRIES, XX bags	lb.	.32 .33
Powdered, boxes	lb	.34 .35
Culvers Root, bags	lb.	.11 .12
Cumin Seed, Malta, bags	lb.	.12½ .12¾
Morocco, bags	lb.	.06¾ .07
Cuttlefish, Bone Trieste, Straps	lb.	.19 .22
French, boxes	lb.	.18 .21
Powdered, bbls	lb.	.09 .10
Broken, bales	lb.	.07 ...
Damiana Leaves, bales	lb.	.15 .16
Dandelion Root, Imp. bags	lb.	.10 .11
Deer Tongue Leaves, bales	lb.	.08 .10
Digitalis Leaves, bales	lb.	.10 .11
Dogwood Bark, Jamaica bags	lb.	.08 .09
American bales	lb.	.06½ ...
Doggrass Root, USP, cut bags	lb.	.14½ .15
Dragons Blood Mass, cases	lb.	.80 .85
Reeds, boxes	lb.	.90 .95
Echinacea Root, bags	lb.	.16 .17
Elcampane Root, bags	lb.	.06 .07
Elder Flowers, bags	lb.	.20 .23
Elemi Gum, 85 lb cases	lb.	.26 .28
Elm Bark, bundles	lb.	.19 .22
Grinding bags	lb.	.09 .10
Powdered, bbls	lb.	.16 .18
Ephedra Vulgaris, bales	lb.	.05 .06
ERGOT, 150-200 lb bags	lb.	.47 .58
Eucalyptus Leaves, bales	lb.	.05 .06
Euphorbia Pilulifera, Herb, bags	lb.	.05 .08
Euphorbium Gum, cases	lb.	.14 .20
Fennel Seed, French, bags	lb.	.07 .07½
German bags	lb.	.08 .10
Foenugreek Seed, 200 lb bags	lb.	.04 .04½
Fish Berries, 100-125 lb bag	lb.	.06 .07½
Flax Seed, Whole 182 lb bbls	lb.	.06½ .07½
Ground, 180 lb bbls	lb.	.07 .09
Fringe Tree Bark or Root bags	lb.	.11 .13
Fumigating Pastiles, boxes	lb.	.28 .33
Galangal Root, bags	lb.	.08 .09
Galbanum Gum, cans	lb.	1.00 1.05
Gamboge Gum, 100 lb cases	lb.	.65 .70
Powdered, cases	lb.	.80 .85
Gelsemium Root, bags	lb.	.07 .08
GENTIAN ROOT, bags	lb.	.07 .08
Ground bbls, boxes	lb.	.10 .11
Powdered, bbls, boxes	lb.	.10 .11
Ginger, African, bags	lb.	.05½ .06
Jamaica Grinding bags	lb.	.08¼ .08½
Cochin ABC & Lemon, bags	lb.	.07¼ .07½
Ginseng Root, cultivated cs	lb.	8.00 10.00
Wild Southern, cases	lb.	11.00 13.00
Golden Seal Root, bags	lb.	.70 .75
Powdered, boxes	lb.	1.00 1.10
Herb, barrels	lb.	1.05 1.15
Grains of Paradise, bags	lb.	.13 .15
Grindelia Robusta, Herb, bale	lb.	.07 .08
Guaiac Gum, 150 lb cases	lb.	.25 .26
Strained 75 lb cases	lb.	.70 .75
Guarana, tin cases	lb.	.75 1.00
Hellebore Root, Black, bbls	lb.	.05½ .06
White, 250 lb bbls	lb.	.07½ .08½
Powdered	lb.	.13 .15
Helonias Root, bags	lb.	.30 .32
Hemp Seed, bags	lb.	.03¼ .03¾
Henbane Leaves, USP, bales	lb.	.09 .10
HENNA LEAVES, bales	lb.	.07½ .08½
Powdered	lb.	.11 .12
Hops, bales	lb.	.21 .24
Horehound, Herb, bales	lb.	.07 .08
Hydrangea Root, bales	lb.	.07 .08
IPECAC ROOT, Carteagna, bags	lb.	.90 .95
Powdered, 220 lb bbls	lb.	1.00 1.10
Isinglass, American, 130 lb cases	lb.	.95 1.00
Russian (Beluga), boxes	lb.	4.50 ...
Jaborandi Leaves, bales	lb.	.09 .10
Jalap Root, Whole, 150 lb bag	lb.	.18 .20
USP, Powd, 250 lb bbls	lb.	.23 .26
Japan Wax 224 lb. cases	lb.	.08½ .09
JUNIPER BERRIES, 125 lb bags	lb.	.04½ .05
Kamala, boxes	lb.	.40 .45
Karaya Gum, Powdered, bbls	lb.	.16 .17
Kava Kava Root, bags	lb.	.13 .14
Kino Gum, Black, cases	lb.	.50 .55
Kola Nuts, 150 lb bags	lb.	.05½ .06
Lady Slipper Root, bags	lb.	.40 .45
Larkspur Seed, bags	lb.	.28 .33
Laurel Berries, bags	lb.	.08 .09
Leaves, Greek, bags	lb.	.05 .05½
Italian, bales	lb.	.08 .09
Lavender Flowers, Ordinary	lb.	.18 .20
Selected	lb.	.30 .32
Lemon Peel, bags	lb.	.08 .09
LICORICE ROOT, Whole bbls	lb.	.12 .15
Spanish Natural bales	lb.	.05½ .07
Powdered, bbls	lb.	.08 .10
Selected 2 & 5 lb bdls	lb.	.12 .15
Cutting, 125 lb bags	ln.	.06 .06½
Turkish, 150 lb bales	lb.	.05 ...
Linden Flowers with leaves, bales	lb.	.18 .19
Without leaves, bales	lb.	.23 .24
Liverwort Leaves, bales	lb.	.14 .15
Lobelia, Herb, bales	lb.	.09 .10
Seed, bags	lb.	.21 .26
Lovage Root, Imp., bags	lb.	.15 .17
Lupulin N. F., tins	lb.	1.25 1.30
Lycopodium, 88 lb. cases	lb.	.26 .28
MACE SIAUW, No. 1, cases	lb.	.31 .32
Banda No. 1, cases	lb.	.38 .40
Batavia No. 2, cases	lb.	.31 .32
Malva Flowers, Blue, bales	lb.	.80 .85
Black, bales	lb.	.25 .40
Leaves, bales	lb.	.12 .13
Manaca Root, bales	lb.	.22 .23
Manna, Large Flake, cases	lb.	.50 .56
Small Flake, cakes	lb.	.35 .38
Sorts, cases	lb.	.45 .50
Mandrake Root, bags	lb.	.08 .09
Marjoram, Herb	lb.	.13 .13½
French, No. 1 bales	lb.	.14 .14½
German, bales	lb.	.38 .43
Mastic Gum, 120 lb cans	lb.	.20 .23
Matico Leaves, bales	lb.	.15 .16
Mezereon Bark, bags	lb.	.02¾ .03
Millet Seed, Yellow, bags	lb.	.05 .06
Montan Wax, Crude, bags	lb.	.26 .28
Bleached, bags	lb.	.09 .11
Moss, Iceland, bales	lb.	.10 .12
Irish, Bleached, bales	lb.	.75 .80
Mullein Flowers, tins	lb.	.07 .07½
Leaves, bales	lb.	.06½ .07½
Musk Root, Russian, bags	lb.	.16 .18
Myrrh Gum, 200 lb, cases	lb.	.22 ...
Nutgalls, Chinese, bags	lb.	... Nom.
Aleppy, bags	lb.	.13 .15
Powdered, bags	lb.	.12 .12½
Nutmegs, 110's cases	lb.	.15 .15½
75's & 80's cases	lb.	.18 .19
Grinding, bags	lb	.05 .06
NUX-VOMICA Buttons, bag	lb.	.08 .09
Powdered, 200 lb bbls	lb.	.06 .06½
Oak Bark, bags	lb.	.07 .08
Olibanum Gum, 280 lb cases	lb.	.23 .25
Siftings	lb.	.16 .18
Tears, No. 1 Extra	lb.	.12 .13
No. 2	lb.	12.00 13.00
No. 3	lb.	13.00 14.00
Opium Gum, USP, cases	lb.	13.00 14.00
Granular, cans	lb.	.25 .30
Powdered, USP, cans	lb.	.08 .09
Orange Flowers, cases	lb.	.07 .08
Peel, Bitter, bags	lb.	
Sweet bags,	lb.	
ORRIS ROOT, Flor. bid. bags	lb.	.11 .12
Powdered, 200 lb bbls	lb.	.14 .15
Verona, bags	lb.	.09 .09½
Powdered, 200 lb bbls	lb.	.12 .13
Fingers, boxes	lb.	.90 .95
Ozokerite Wax, Brown, Hard	lb.	... ...
Bags	lb.	.24 .25
Green, Hard, bags	lb.	.25 .27
Yellow, Refined, bags	lb.	.33 .34
Papain, Crude, 150 lb cases	lb.	1.85 1.90
Pure, Powdered, 10 lb bot	lb.	2.00 2.05
Paprika, bags	lb.	.20 .20½
Pareira Brava Root, bags	lb.	.13 .14
Passion Flower, bales	lb	.04½ .05½
Patchouli Leaves, bales	lb.	.15 .16
Pennyroyal, Herb, 100 lb bags	lb.	.08 .09
Leaves, 100 lb bags	lb.	.12 .13

Drugs and Spices

PEPPERMINT LEAVES, Imp bales	lb.	.30	.40
Domestic, bales	lb	.22	.26
Pichi Leaves, bags	lb	.10	.11
Pimento Select, bags	lb.	.05½	.06
Pink Root, True, bags	lb.	.30	.32
Pleurisy Root, bags	lb.	.15	.16
Poke Berries, bags	lb.	.14	.15
Root, 200 lb bales	lb.	.06	.06½
Pomegrant Bark of Root, bags	lb.	.29	.34
Bark of Fruit, bags	lb.	.20	.25
Bark of Tree, bags	lb.	.15	.18
POPPY FLOWERS, Red, bags	lb.	.55	.60
Prickly Ash Bark	lb.	.12	.15
Southern bags	lb.	.11	.11½
Northern, bags	lb.	.11	.12
Berries, bags	lb.	.20	.21
Prince's Pine, bales	lb.	.15	20
Psyllium Seed, Black, bags	lb.	.21	.24
Plantago Seed, Blonde, Bags	lb.	08	.10
Pulsatilla, Herb, bags	lb.	.10	.11
Pumpkin Seed, bags	lb.	.11	12
Pyrethrum Flowers	lb.	.16	.17
Pwd., pure, 200 lb.bbls.	lb.	.21	.22
Quassia Chips, bags	lb.	.05½	.06¼
Quebracho, bulk, 125 lb. bbl.	lb.	.20	.21
Quince Seed, Spanish bags	lb.	1.05	1.30
Persian, bags	lb	1.35	1.80
Rape Seed, South American, bags	lb.	.05½	.06
Dutch, bags	lb.	.06	.06½
Raspberries, Dried, bbls.	lb.	.45	.50
Red Saunders, bags	lb.	.08	.09
Rhatany Root, bags	lb.	.10	.11
Rhubarb Root, HD, cases	lb.	.19	.20
Powdered, bbls	lb.	.25	.26
Rosemary Leaves, bales	lb.	.05	.05½
Flowers, cases, bales	lb.	.28	.32
Rose Petals, pale	lb.	.14	.15
Red	lb.	.45	.50
Rue, Herb, bales	lb.	.18	.20
Sabadilla Seed, bags	lb.	.17	.18
Powdered, bbls	lb.	.19	19½
SAFFRON FLOWERS, American, bales	lb.	.21	.22
Valencia, 1 lb cans	lb.	9.50	10.50
Sage Dalmatian, bales	lb.	.05½	.06
Sandarac Gum, 300 lb bbls.	lb.	.30	.35
Sarsaparilla Root, Honduras, bales	lb.	.60	.65
Mexican, bales	lb.	.13	.14
Sassafras Bark, Ordinary, bales		.08	.10
Select, bales	lb.	.16	.17
Savory Leaves, bale	lb.	.05½	.06½
Saw Palmetto Berries, bags	lb.	.07½	.08½
Scammony Resin, boxes	lb.	1.30	1.35
Root, bags	lb.	.07	.08
Senega Root, bags	lb.	.31	.33
SENNA ALEX., 150 lb cases	lb.	.20	.25
Half leaf 150 lb bales	lb.	.10	.12
Sifting, 400 lb bales	lb.	.08	.09
Tinnevelly, Bold, 350 lb bales	lb.	.10	.12
Medium Leaf	lb.	.08	.09
Small Leaf	lb.	.06	.08
Pods, 350 lb	lb.	.08	.09
Powdered, 200 lb	lb.	...	.10
Serpentaria Root, bags	lb.	.32	.33
Simaruba Bark, bales	lb.	.24	.26
Skullcap Leaves, Eastern, bales	lb.	.28	.33
Western, bales	lb.	.17	.27
Skunk Cabbage, Natural, bales	lb.	.12	.14
Snake Root, Canada Natural, bags	lb.	.18	.19
Canada, Stripped, bags	lb.	...	.50
Soap Bark	lb.	.08	.09
Cut, 125-175 lb bags	lb.	.07	.08
Crushed, 200 lb bbls.	lb.	.16	...
Powdered, bbls.	lb.	.12	.13
Spearmint Leaves, American, bales	lb.	.22	.23
Spermaceti, blocks, cakes, cases	lb.	.21	.23
Bulk	lb.	.20	.22
Spikenard Root, bags	lb.	.08	.09
Squaw Vine, bales	lb.	.12	.13
Squills, White	lb.	.05	.06
Powdered, bulk	lb.	.16	.18
Stavesacre Seed, bags	lb.	.13	.14
Stillingia Root, bags	lb.	.07½	.08
Stone Root, bags	lb.	.07	.08
St. Ignatius Beans, bags	lb.	...	Nom.
St. John's Bread, bags	lb.	...	.09
STRAMONIUM LEAVES, bales	lb.	.09	.10
Seed, bags	lb.	.07½	...
Strophanthus Seed, Kombe, bags	lb.	1.80	2.00
Styrax Liquid, Artificial	lb.	.26	.35
Genuine, USP	lb.	.38	.43
Sunflower Seed, bags Calif.	lb.	.04½	.05
South American, bags	lb.	.07	.07½
Tamarinds, bbls.	lb.	.05	.06
Kegs	keg	3.75	3.85
Tansy, Herb, bales	lb.	.12	.13
Thus Gum, 280 lb bbls	lb.	.07½	.16½
THYME, Spanish, bales	lb.	.06	.07
French, bales	lb.	.05	.06
Tonga Root, bundles	lb.	.25	.26
Bark, bundles	lb.	.20	.21
Tonka Beans, Angostura Cases		1.50	1.60
Para cases	lb.	.70	.75
Surinam cases	lb.	.70	.75
Tragacanth Gum, No 1, 100 lb. cases	lb.	.95	1.05
No. 2	lb.	.80	.85
No. 3	lb.	.60	.70
Powdered, 50 lb boxes	lb.	.70	.75
Turkish cases	lb.	.45	.75
Turmeric Root Madras, bags	lb.	.06	.06½
Aleppy bags	lb.	.05½	.06
Powdered	lb.	.11	.13
China bags	lb.	.11	.12
Turpentine Venice True, 80 lb cases	lb.	.32	.40
Artificial, 80 lb cases	lb.	.17	.18
Uva Ursi Leaves, bales	lb.	.05	.05½
Valerian Root, Belgium bags	lb	.09	.10
VANILLA BEANS, Mexican, whole, cases	lb.	3.75	4.25
Cuts, cases	lb.	2.50	2.65
Bourbon, cases	lb.	.90	1.40
Vetivert Root, 100 lb bags	lb.	.25	...
Violet Flowers, bags	lb.	.90	.95
Wahoo Bark of Root, bags	lb.	.32	.33
Bark of Tree, bags	lb.	.16	.17
White Pine Bark, Roseed, bags	lb.	.06	.08
White Poplar Bark, bags	lb.	.06	.07½
Wild Cherry Bark, Natural thin, Green	lb.	.06	.07
Rossed bales	lb.	.09	.10
Thick Rossed, bales	lb.	.04	.05
Wild Indigo Root, bags	lb.	.09	.10
Willow Bark, bags	lb.	.05	.05½
White, bags	lb.	.15	...
Witch Hazel Bark, bags	lb.	.05	.06
Leaves, bales	lb.	.06	.07
Wormseed, American, bags	lb.	.05½	.06
Wormwood, Herb, Imp., bales	lb.	.08	.09
Yellow Dock Root, bags	lb.	.07	.08
Yerba Mate, bags	lb.	.14	.16
Santa, bags	lb.	.07	.08

More Earning Reports

A. STEIN & CO.

A. Stein & Co. year ended Dec. 31: Net profit after all charges and Federal taxes, $527,523, equivalent after preferred dividends, to $1.71 a share on 240,000 common shares compared with $614,294, or $2.04 a share, in 1930.

SQUIBB PLAN, INC.

Squibb Plan, Inc., affiliate of E. R. Squibb & Sons, reports average net earnings to all members in 1931 of 23.8% on capital paid in for distributors preferred shares. "More remarkable than average net earnings," the report states, "is the fact that in 1931, one of the worst years for business generally, total direct purchases of Squibb products by members of the plan increased 23.2% over their respective purchases in 1930." In his annual statement to shareholders, Carleton H. Palmer, president, said that in the two years and 84 days of the Plan's operation, members together had earned more than 60% on their investment.

SHARP & DOHME

For the year ended December 31, 1931, Sharp & Dohme, Inc., has reported a consolidated net profit of $777,492, after depreciation, Federal taxes and reserves. This was the equivalent of $3.39 a share on 229,085 no-par shares of $3.50 cumulative convertible preference stock. It compared with a net profit of $1,225,336, or 54 cents a share on 776,627 no-par common shares, after preference dividends, in 1930. After preference dividends there was a deficit of $24,305 for the year 1931.

The consolidated balance sheet as of December 31, 1931, showed current assets of $6,841,081, including $1,437,159 cash, and current liabilities of $257,012, leaving an indicated net working capital of $6,584,069, as compared with current assets of $7,175,243, including $891,469 cash, current liabilities of $332,332, and an indicated net working capital of $6,842,911 at the end of 1930. Total assets at the end of 1931 were $10,619,498, against $11,041,255 in 1930. The surplus account showed an earned surplus of $692,816, as of December 31, 1931, compared with $927,160 as of December 31, 1930.

U. S. ALCOHOL

U. S. Industrial Alcohol Co. and subsidiaries reports for the year ended December 31, 1931, net loss of $1,833,828 after expenses and depreciation. Only minor adjustments were necessary during the year and these were charged direct to operating expenses, it was stated. For the previous year the company reported, after expenses and depreciation, a profit of $1,104,753, before inventory adjustments, and a net loss of $1,895,247 after inventory adjustments.

Spearmint Firmer

Spearmint oil, as has been the case with peppermint, has taken on a firmer aspect in the current spot market. Low prices, it is generally conceded, are bound to affect plantings this spring with a lower production generally anticipated. Spot quotations remain unchanged at from $1.15 to $1.25 per pound.

Wormseed Steadier

The undertone in wormseed is firmer with stocks being well held. There are no indications in the market that prices below the schedule of from $2.15 to $2.25 per pound are being done these prices being considered as attractive to the consuming trade.

As a result of lower manufacturing costs leading sellers have reduced prices on iron and ammonium citrate to the basis of from 52c to 54c per pound as to quantity.

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Bacharach Again in Alcohol

Lester Bacharach, for many years associated with the industrial alcohol industry, has acquired the entire interest in a former industrial alcohol and solvent chemical plant at Philadelphia. The plant is reported to be the old Quaker denaturing plant.

N.Y.Q. in St. Louis

New York Quinine & Chemical Co., Inc., New York, has established its St. Louis branch in new quarters at 403 No. Main st., that city.

Melatol Lab. Products

Melatol Laboratories, San Francisco, has started manufacture of diabetes, trench mouth and pyorrhea remedies.

Squibb's Aspirin

E. R. Squibb & Sons has started a national advertising campaign on Squibb's Aspirin, the first time this product has been backed by national advertising.

Conti Campaign

Conti Castile Soap and Conti Castile Shampoo have started a national advertising campaign using four women's magazines.

New Incorporations

Jeunesse d'Or, Inc., Wilmington, Del., perfumes, cosmetics—Corp. Service Co., 250 shares common.

Sterling Soap and Chemical Co., Wilmington, Del., disinfectants—Harry P. Joslyn, Wilmington, Del., $25,000.

Health Beverages Co., Wilmington, Del., soft drinks, citrus beverages, syrups—Corporation Fiscal Co., $100,000.

Fischman Soda Fountain Supply Co., Philadelphia, Pa., fruit juices, syrups, carbonic gases—Corporation Guarantee and Trust Co., 1,000 shares common.

Home Store Products, New York City, druggists—S. Spring, 521 Fifth Ave., $26,000 preferred; 100 shares common.

Black Rose Co., New York City, toilet articles—A. H. Schaffer, 545 Fifth Ave., $20,000.

K. C. N. Products Co., Paterson, N. J., chemists—Koch & Simon, Paterson, $100,000 preferred, 100 shares common.

Peerless Laboratories, Inc., Newark, N. J., manufacture polishes, chemicals—Carl Olsan, Newark, 100 shares common.

H. Biasetti Importing Co., New York City, oils for medicines and perfumeries—D. C. Broderick, 51 Chambers St., $75,000.

Athelene Chemical Corp., New York City, drugs—Cohen & Weden, 276 Fifth Ave., $10,000.

Alje Laboratories, Bronx, N. Y., toilet articles—Gluckman & Gluckman, 299 Broadway, $10,000.

American Tung Oil Products Corp., New York City, lands—United States Corporation Co., $500,000 shares common.

Amico Laboratories, Inc., Wilmington, Del., amithol, healing preparations, drugs—Corporation Trust Co., 10,000 shares common.

Katolox Laboratories, Inc., Wilmington, Del., manufacture organic iodine—Corporation Trust Co., $100,000, 3,500 shares common.

Modern Health Products, Inc., New York City, health foods—United States Corporation Co., $25,000, 2,000 shares common.

Joans Beauty Shoppe, Inc., Scranton, Pa.—Capital Trust Co. of Delaware, Dover, Del., $10,000.

Hummel Chemical Co., New York City, drugs—G. W. Files, 270 Broadway, 200 shares common.

W. A. Stahly Mfg. Co., Queens, N. Y., synthetic resin—P. Wolinsky, 299 Broadway, New York City, $20,000.

Derosa Bros. Inc., Jersey City, N. J., druggists—Peter P. Artaserse, Jersey City, 1,500 shares common.

Rojane, New York City, chemicals—H. L. Kreeger, 551 Fifth Ave., 200 shares common.

Robinson, Wagner Co., New York City, chemists—Reeves, Todd, Ely, Price & Peaty, 1 Cedar St., 100 shares common.

Pentol Co., New York City, chemicals—V. Gordon, 100 West 40th St., $20,000.

Puritee Products, Fredonia, N. Y., druggists business—L. G. Monroe, Fredonia, $30,000.

Bengor Supply Co., Yonkers, N. Y., beauty parlor—M. Rich, Peekskill, N. Y., 100 shares common.

Ta-Go Laboratories, Inc., Wilmington, Del., general drugs—Corporation Trust Co., $100,000; 10,000 shares common.

R. S. Products Corp., Philadelphia, Pa., chemicals—Corporation Guarantee and Trust Co., 1,000 shares common.

Carbonic Gas Co. of America, New York City, drugs—N. Friedman, 233 Broadway, 100 shares common.

Albrecht Import Co., New York City, drugs, chemicals—McDermott & Turner, 165 Broadway, $20,000.

Erger's, Queens, N. Y., druggist—Goodelman & & Goodel, 295 Madison Ave., New York City, $20,000.

Gamble Chemical and Equipment Co., Wilmington, Del., chemicals, chemical products—Corporation Service Co., $25,000; 2,500 shares common.

Miller, Owens Corp., New York City, products handled by drug stores and pharmacies—U. S. Corporation Co., 100,000 shares common.

Wands, New York City, drugs—N. Friedman, 233 Broadway, 100 shares common.

C. and C. Drug Co., Brooklyn, N. Y.—F. S. Chilton, 16 Court St., $10,000.

Natural Soda Products Co., Wilmington, Del., sodium, potassium, magnesium, calcium, iodine, bromine—Corporation Trust Co., 8,600 shares common.

Sun-a-Sured, Inc., Wilmington, Del., chemical, electrical, dietetic research—Corporation Trust Co., Wilmington, Del., 1,000 shares common.

Maison Juerrelle, Inc., Wilmington, Del., soaps, cleaning compounds—Corporation Trust Co., $5,000.

Liberty Pharmaceutical Corp., Wilmington, Del., drugs, medicines—Colonial Charter Co., $50,000, 5,000 shares common.

Parfumeurs Parisiens, New York City, cosmetics—J. Lebloss, 15 West 34th St., $10,000.

Doho Chemical Corp., New York City, drugs—J. M. Rudy, 110 East 42nd St., $5,000.

C. D. Burchard, New York City, drugs—J. H. Hayes, 26 Broadway, $50,000 preferred, 300 shares common.

Rickel-Lane Corp., Brooklyn, N. Y., drugs—Bergmann & Cole, 217 Broadway, New York City, 200 shares common.

Sanitary Supply Co., New York City, drugs—Paskus, Gordon & Hyman, 2 Rector St., $45,000 preferred, 100 shares common.

Varying Drug Effects

(*Continued from page 218*)

effects become apparent. In other words no effect is observed with a number of drugs during the introductory phase, and the effect is noted only during the release phase.

Another interesting and practical point may be considered. I refer to the altered reaction of a tissue that is in a phase of drug effect. Let us perfuse a vessel with alypin which we have previously mentioned as a vaso-constrictor. Now let us follow with another vaso-constrictor, barium chloride. One should expect a priori an increase in the vaso-constriction. There should result either the added effects of the two-summation, or perhaps a multiple-potentiation. What actually happens however is that the vaso-constricting barium chloride becomes vaso-dilating after the use of alypin. Thus ordinarily strychnine is a vaso-constrictor, but when used with other vaso-constricting agents as barium chloride, histamine, adrenalin, nicotine, in place of the expected increase of effect, there is actually the reverse. What is more interesting is that one can use amounts of strychnine which in themselves show no apparent effect, yet barium chloride after this becomes a vaso-dilator.

In this manner we come to an entirely new field of pharmacology, namely the action of a drug which apparently has no effect. In other words egg albumin has no effect upon the cornea, but it increases the anesthetic effectiveness of cocaine about fifteen times.

Let us take the well-known phase influence of calcium on adrenalin for it is well known that the result of adrenalin on a blood vessel is dependent upon the amount of calcium present; in other words adrenalin may be a vaso-dilator or vaso-constrictor, in exactly the same amount according to the calcium available. Thus if one works with frogs he will observe differences in response to adrenalin in Spring and Fall, in other words according to the amount of calcium present. If time permitted one could go on showing the importance of phase effects to modalities, either day, week, month, seasonal or year. Phase effects have been studied throughout the twenty-four hour period and remarkable differences noted at different times. This is not a question of rest and sleep since they are also observed at the same hours in night workers who sleep during the day as in day workers. Hourly phase effects have also been noted in relation to digestion. Monthly phase effects have been recorded in relation to menstruation, etc.

There is however little necessity of my detailing these things since they are all contained in a monograph which will soon be published under the title of "Phasic Introductory and Release Effects of the Cocaine Group on the Blood Vessels and an attempt at a general Appraisal of Phase Effects," by Eduard Rentz.

Price Packaging

(*Continued from page 220*)

on their products with regard to Macy and other price-cutting establishments is not generally realized. Some time ago Elizabeth Arden printed the name of the retailer to whom the goods were sold in the upper left hand corner of the label. This meant a special label for each of their retail accounts. But even this did not stop Macy who sold the goods with the name scratched off the label. Of course this disfigured the label, but Macy did not care. Following this, Elizabeth Arden had the names of their distributors printed all over the background of the label so that the distributor's name could not possibly be removed without entirely removing the label.

Under these circumstances Macy was forced to sell packages bearing the name of another retailer. Also the definite place or places where Macy secured its supplies of Arden goods could not be concealed. Arden found, however, that Macy continued to buy the goods from many retailers throughout the country, even to the West Coast, and sell them at cut prices in their New York establishment.

That demands upon these manufacturers will follow to have them sell the same sizes to other establishments throughout the country is anticipated. However, these two manufacturers state that no other retailer than Macy will be included in such a plan. In the first place these manufacturers operate on a plan of selection of retail accounts and the number of accounts is intentionally kept low. There is no retailer who can force himself upon these manufacturers unless the manufacturers want to accept him. In the case of Macy, the manufacturers have only accepted him at the request of the large recognized retail accounts in New York. Elizabeth Arden has every large department store in New York displaying and actively distributing its goods. It is for the benefit of these accounts that the move is being made.

Ambrosia's Plan

(*Continued from page 236*)

be used until Ambrosia had been developed in the mind of the public as the pore-deep cleanser. Those responsible for the merchandising of Ambrosia state that if Ambrosia had been introduced as the quickest and most convenient method of skin care, it most certainly would have been regarded as an incidental daytime beauty aid. Its entire future growth, it is said, would have been stunted. But Ambrosia was first "placed" as a new type of skin cleanser which produces new beauty results, and thus, with a background of medical approval, the appeal of the one minute facial is multiplied.

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Index to Advertisers

Abbott Laboratories, No. Chicago, Ill. 275
Alsop Engineering Co., New York ..... Cover 2
American Potash & Chemical Corp., New York 261
Anchor Cap & Closure Corp., Long Island City, N. Y. 206
Armstrong Cork Co., Lancaster, Pa. 210
Art Tube Co., Irvington, N. J. 255

Bush & Co., Inc., W. J., New York 259

California Fruit Growers Exchange, Ontario, Cal. 273
Citro Chemical Co., Maywood, N. J. 281
Coignet Gelatines, New York 281
Colgate-Palmolive-Peet Co., Chicago, Ill. 281
Colton Co., Arthur, Detroit, Mich. 247
Crown Cork & Seal Co., Baltimore, Md. 209

Dodge & Olcott Co., New York 203
Dow Chemical Co., Midland, Mich. ..... Cover 1
Dreyer Inc., P. R., New York 277, 283

Empire Glass Co., New York 281

Fritzsche Brothers, Inc., New York 251

Givaudan-Delawanna, Inc., New York 207
Gutmann & Co., Ferdinand, Brooklyn, N. Y. 257

Heyden Chemical Corp., New York 267
Hopkins & Co., J. L., New York 259
Huisking & Co., Chas. L., New York 259

Iliff-Bruff Chemical Co., Hoopeston, Ill. 281
Industrial Chemical Sales Co., Inc., New York. Insert facing 264
Interstate Color Co., Inc., New York 281

Kimble Glass Co., Vineland, N. J. 212
Klipstein & Sons Co., Inc., E. C., New York 263

Leonhard Wax Co., Inc., Theodor, Paterson, N. J. 257
Liquid Carbonic Corp., Chicago, Ill. ..... Insert facing 249

Magnus, Mabee & Reynard, Inc., New York 205
Mallinckrodt Chemical Works, St. Louis 214
Merck & Co., Inc., Rahway, N. J. ..... Insert facing 265
Mixing Equipment Co., Inc., Rochester, N. Y. 281
Monsanto Chemical Works, St. Louis. Insert between 264 & 265

National Adhesives Corp., New York 255
New England Collapsible Tube Co., New York 213
N. Y. Quinine & Chemical Works, Brooklyn, N. Y. 288
Norwegian Cod Liver Oil Ass'n, Norway 283

Owens-Illinois Glass Co., Toledo, Ohio 211

Parsons, M. W., New York 263
Penick & Co., S. B., New York 261
Pfizer & Co., Inc., Chas., New York ..... Cover 4
Phoenix Hermetic Co., Chicago, Ill. 201
Plaimar, Ltd., Perth, Western Australia 273
Powell & Co., Inc., John, New York 271

Resinox Corp., New York 247
Rohm & Haas Co., Inc., Philadelphia 271

Schliemann Companies, Inc., New York 275
Sherka Chemical Co., Inc., New York 261
Silver Import Co., Geo., New York 243
Stokes Machine Co., F. J., Philadelphia 245
Sturge, John & E., Birmingham, England
Insert between 264 & 265
Swindell Bros., Baltimore, Md. ..... Cover 3

Todd Co., A. M., Kalamazoo, Mich. 281

Ungerer & Co., New York 239
U. S. Bottlers Machinery Co., Chicago ..... Insert facing 248
U. S. Industrial Alcohol Co., New York 269

van Ameringen-Haebler, Inc., New York 241

White Metal Mfg. Co., Hoboken, N. J. 208
Will & Baumer Candle Co., Inc., Syracuse, N. Y. 275
Wilson Laboratories, Chicago, Ill. 277